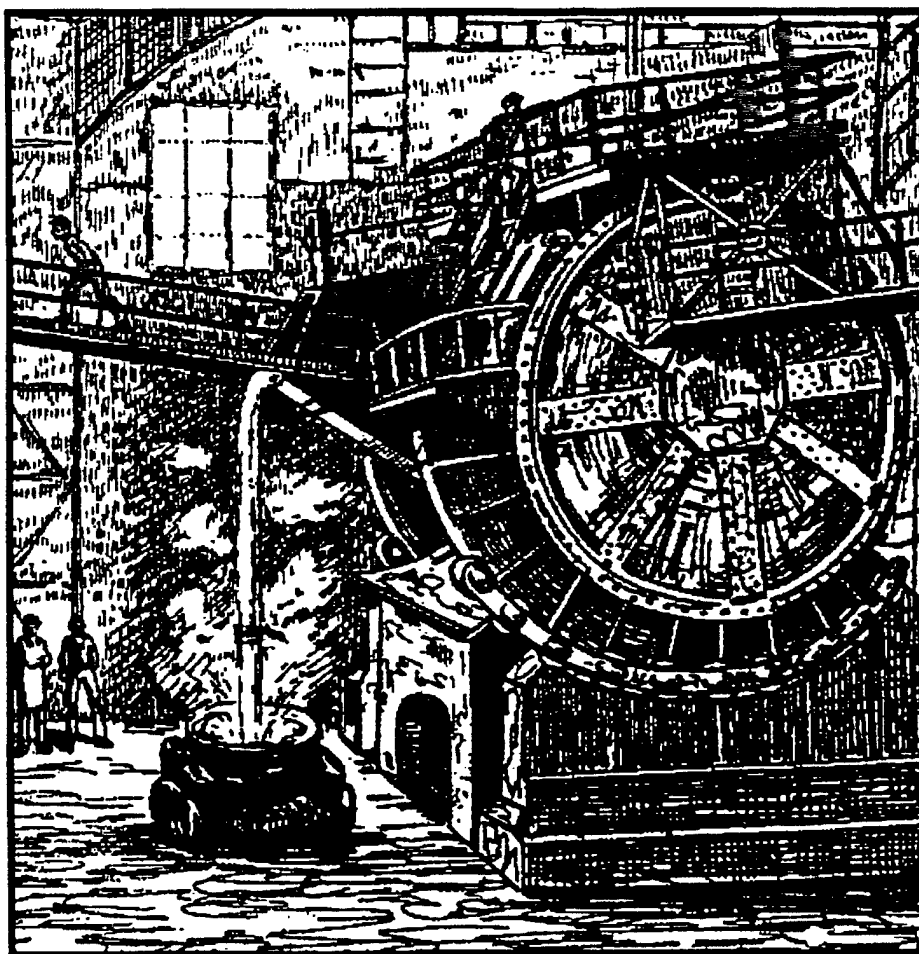


***The Historic Milling Industry
in the
Fort Knox Military Reservation
Bullitt, Hardin and Meade Counties
Kentucky***



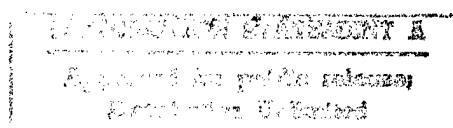
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**The Historic Milling Industry in
the Fort Knox Military Reservation,
Bullitt, Hardin and Meade Counties, Kentucky**

by Nancy O'Malley

Archaeological Report 367

**Program for Cultural Resource Assessment
University of Kentucky
Lexington, Kentucky**

Table of Contents

Abstract	v
Acknowledgments	vi
Introduction	1
Research Methodology	1
The Milling Industry in Kentucky	2
The Establishment of Water Powered Mills and Associated Laws	4
Mill Construction and Products	6
Milling in the Fort Knox Area	10
Manufacturing Statistics for Mills in Bullitt, Hardin and Meade Counties	11
Employment Statistics for Mills in Bullitt, Hardin and Meade Counties	13
Previously Documented Mills in the Fort Knox Area	15
The Stovall Mill (15Hd253)	17
Mills Identified in Documents	20
Mill Reported on Brown's Run (Bullitt County)	22
Mill Reported on Buffalo Creek	22
Mills Reported on Cedar Creek (Bullitt County)	23
Mills Reported on Cedar Creek (Hardin County)	25
Mills Reported on Crooked Creek (Bullitt County)	27
Mills Reported on Mill Creek (Hardin County)	27
Mills Reported on Otter Creek (Meade and Hardin Counties)	32
Mills Reported on Poplar Springs Branch (Hardin County)	37
Mills Reported on Rolling Fork (Hardin and Bullitt Counties)	38
Mills Reported on Salt River (Hardin and Bullitt Counties)	39
Mills Reported But No Water Course Indicated	42
Summary of Documentary Research	43
Test Excavations at the Garnettsville Mill (15Md185)	45
Archaeological Testing Strategy	51
Methodology	52
Results of Investigations	54
Materials Recovered	57
Conclusions and Testing Program	91
Mapping Program for the Town of Garnettsville	93

Recommendations	96
Bibliography	98
Appendix A: Mills in Bullitt, Hardin and Meade Counties Listed in Federal Manufacturing Censuses (1820, 1850-1880).	104
Appendix B: Federal Population Census Statistics for Milling Occupations in Bullitt, Hardin and Meade Counties (1850-1880).	143
Appendix C: Known and Estimated Locations of Mill Sites in Fort Knox.	156
Appendix D: Glossary of Milling Terms.	162
Appendix E: Vitae of Principal Investigator.	164

List of Figures

1. Plats of three mill tracts in Fort Knox.	26
2. The Garnettsville Mill, showing stone foundations.	47
3. The Garnettsville Mill site relative to Otter Creek.	48
4. The arch and wall in cutbank at Garnettsville Mill.	49
5. The Garnettsville Mill site plan.	50
6. Unit 1 profile of the north and east walls.	56
7. Units 1 and 2.	57
8. Unit 2 profile of the south and west walls.	60
9. Unit 3 profile of the south wall.	62
10. Units 3 and 4.	63
11. Unit 4 profile of the north and west walls.	66
12. Units 5 and 6.	68
13. Unit 5 profile of the south and west walls.	69
14. Unit 6 profile of the north and east walls.	71
15. Unit 7 profile of the north and east walls.	73
16. Unit 8 profile of the east wall.	75
17. Unit 9 profile of the south and west walls.	78
18. Distribution of flat glass thickness from the Garnettsville Mill.	81
19. Architectural and Hardware/Industrial artifacts.	82
20. Hardware/Industrial artifacts.	84
21. Large gear fragments.	85
22. Hardware/Industrial artifacts.	88
23. Ceramics.	90
24. Map of Garnettsville.	94

List of Tables

1. Frequency of Artifacts from Major Functional Categories.	79
2. Artifacts Classified as Hardware/Industrial.	86
3. Correlations of Landowners in Garnettsville Between 1919 and 1940	95

ABSTRACT

This report presents the results of documentary research on mills that once were sited within the confines of the Fort Knox Military Reservation as well as the results of test excavations at the Garnettsville Mill on Otter Creek. An estimated 56 mill sites were identified from documentary sources; of this total, 21 mills were determined to be either definitely or probably located on the post. Milling statistics available for some of these sites indicate that they were powered by either water or steam, and were most commonly grist and/or saw mills. Milling as an industry declined in the Fort Knox area by the early twentieth century but was an important community service and local business prior to that time. The Garnettsville Mill is a good example of a mill that remained in service for a long period of time. Its use spanned approximately 125-130 years, according to available documentary records. Test excavations at this site revealed well preserved cultural deposits and architectural remains, and recovered mill-related artifacts. On the basis of the test excavations, the Garnettsville Mill is considered to meet the criteria for nomination to the National Register of Historic Places. Recommendations for further research on the mill sites in Fort Knox include further documentary review and analysis to clarify and fill informational gaps for the known mills, determine if the identified mills exist as preserved archaeological sites, and possibly add to the list of known mills. Further research should ultimately result in a thematic nomination of the eligible mill sites to the National Register of Historic Places.

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INTRODUCTION

This report presents the results of documentary research on the historic industry of water-powered milling that operated in what is now the Fort Knox Military Reservation in Bullitt, Hardin and Meade Counties, Kentucky. The purpose of the project was to identify the water-powered mills that once operated within the reservation boundaries, estimate their locations, and to present a synthesis of historical information on the mills' products, owners, operation and other details. The project was funded by the U.S. Department of Defense Legacy Program. Funds awarded to the U.S. Army Armor Center and Fort Knox were subcontracted to the Program for Cultural Resource Assessment, a research unit in the Department of Anthropology at the University of Kentucky.

The bulk of the research reported here is documentary in nature. No field survey to actually locate sites on the ground and determine if they are represented by preserved archaeological deposits and features was undertaken by the University of Kentucky. Under the terms of the project, it is the responsibility of the Fort Knox contract archaeological staff to attempt to locate those mills documented in this study, but not previously recorded as archaeological sites. However, test excavations were conducted at one previously recorded site, Garnett's Mill (15Md185), on Otter Creek. The results of this investigation are also included in this report.

RESEARCH METHODOLOGY

The research described in this report used several documentary sources to identify additional mills in the Fort Knox area beyond those previously described in Holmberg (1991), O'Malley et al. (1980) and other sources. Principal primary sources of information include the Bullitt, Hardin, and Meade county court order and deed books and the federal population and manufacturing census returns. Other public records such as will books were occasionally consulted in instances when a mill owner willed his mill property to his heirs. Circuit court case files also constitute a source of primary information when mill properties were in litigation. However, budget constraints prevented a comprehensive review of these unindexed records. Secondary sources such as research published in the Ancestral News (Ancestral Trails Historical Society, Inc.) and Wilderness Road (Bullitt County Genealogical Society), county histories, state business gazetteers and other sources were also consulted. General information on the milling industry in the late 18th and 19th century was culled from a variety of published sources.

Research focused on locating sites that either were previously unidentified or were recorded sites that had not been researched by Holmberg, who confined his research only to the sites identified on Otter Creek by the 1979 University of Kentucky survey (O'Malley et al. 1980). Other mills for which site locations were known included Site 15Hd253, identified by O'Malley et al. (1980), a site reported to Nancy O'Malley by Richard Briggs, a historian in West Point, Kentucky, as being located on the Salt River in Hardin County, and two other sites dated to 1903 that were shown on a 1975 map (Bleakley 1975). Since

the locations of these four sites were known, their deed histories were reconstructed by following their chains of title from the time they were acquired by the U.S. Government back into the past.

Sites identified solely from documentary sources required a different approach. Mill owners' names and the drainages on which their mills were located were culled from various primary and secondary sources for all three of the counties. Mills that were clearly outside the Fort Knox area were eliminated from any further study. The remaining list of owners were then systematically researched by searching county deed indexes and compiling land acquisitions for the identified names. Each deed was checked for any references to a mill, and the land description was located on topographic maps where possible. Federal manufacturing census returns were reviewed to gather data on mills in the tri-county area. The method had the advantage of gathering a considerable amount of information about the economic context within which the mills operated. The census returns, for instance, provided data on products, capital expenses and profits, and, for the later census years, the types of machinery used. Knowledge of other mills operating in the county provided a basis for estimating the service area of a mill.

THE MILLING INDUSTRY IN KENTUCKY

From the outset of historic settlement in Kentucky, one of the primary needs that had to be met was the production of flour and meal. Kentucky settlers complained frequently about the lack of processed grains to make the breads that were an important part of their diet. The settlement of the Kentucky frontier was complicated by the perilous conditions caused by the Revolutionary War. The establishment of a stable agricultural system to produce necessary foodstuffs was delayed, leading to periods of deprivation and, in some cases, near starvation, as well as heavy reliance on a largely meat diet. Stopgap solutions included transporting flour and meal supplies from the eastern settlements and crafting primitive mills that could process small quantities of grain. However, using mills was contingent on having the grain available to grind, and, because of the dangers of living on the frontier during the Revolutionary War, corn and wheat crops could not always be planted when they needed to be.

Primitive mills often used in frontier settlement contexts consisted of such devices as charred, hollowed logs and wooden pestles, rotary querns, plumping and sapling mills, tub mills or edge runner mills (Rawson 1935). Most of these types utilized hand or animal labor to provide the necessary motive power. An exception is the tub mill which was turned by water power. These types of mills are defined in Appendix D. Since these types of mills processed grain in small quantities, their replacement took place as soon as possible. Documentary sources on the frontier settlement era of Kentucky identify several instances in which settlers built primitive mills for grinding grain. Mills were built at the pioneer station sites of Squire Boone in Shelby County and Hugh McGary in Mercer County (O'Malley 1996b; n.d.) and a tub mill is also known to have operated at Fountain Blue in Mercer County (O'Malley 1987). As soon as settlement conditions permitted, mills utilizing

vertical wheels and water power were built. Filson's 1784 map of Kentucky lists several mills, including Patterson's, Grant's, Morgan's, McConnell's, and Kirkindol's, in the central Kentucky area.

Mills were a common component of the historic Kentucky landscape during the nineteenth century and only declined in numbers during the early twentieth century. The many roads that were named after local mills demonstrate how common mills were in the Commonwealth. Comprehensive archaeological and historical research on the mills of Kentucky has yet to be carried out although a few limited studies have been conducted. Amos and O'Malley (1991) researched mill and distillery sites on the lower drainage area of Boone Creek in Fayette and Clark Counties, and O'Malley has conducted additional unpublished research on mills that has resulted in the recording of several sites in the Bluegrass area. Fisher's Mill in Jefferson County was documented by McBride, McBride and Keys (1988). Charles Hockensmith (1995) published a short article on the Stedman Mill Complex in Franklin County, Kentucky, where paper was produced during the middle decades of the nineteenth century. Other paper mills including the earliest paper mill in the state, established by Elijah Craig, and James and Alexander Parker, in Scott County have been researched by Joe Nickell (1986). The Craig and Parker mill was built near a fulling mill that Craig also owned. A memoir by Ebenezer Hiram Stedman (Dugan and Bull 1959) contained descriptions and discussions of both the paper mill in Scott County where Stedman received early training in papermaking, and his own paper mill in Franklin County. Hockensmith (1979) also documented the remains of Evans' Mill in Fayette County. Examples of architectural studies of milling complexes include Hudson's (1990) work at Millville and the Old Taylor Distillery, and research by Polsgrove and Riesenweber (1990) on the community of Ruddles Mills in Bourbon County. Other mill sites have also been documented by various researchers and are recorded in the files of the Office of State Archaeology at the University of Kentucky in Lexington and the Kentucky Heritage Council in Frankfort.

In 1974, David Kennamer of the Kentucky State News Bureau, estimated that 1000 mills had once operated in Kentucky. He mentioned seven that were still standing at the time of his article. These include Weisenberger's Flour Mill in Scott County (still in operation), Mill Springs Mill in Wayne County, McHargue's Mill in Levi Jack State Park, Wolf Pen Mill in Jefferson County, Green Brothers Mill in Grayson County, Hurt's Mill in Wayne County and Stephen's Mill in McCreary. Kennamer erred in stating that these mills were the only ones still standing in Kentucky. A 1971 survey of historic sites in Kentucky (Spindletop Research, Inc. 1971) listed numerous mills that existed either as archaeological sites or standing structures. In addition to most of the ones listed by Kennamer, the survey includes the Audobon and Bakewell Mill in Henderson County, Buffalo Mill in Lincoln County, Doe Run Inn in Meade County, Gubser's Mill in Campbell County, Henry's/Johnson's Mill in Scott County, Montgomery's Mill in Green County, Old Tunnel Mill in Perry County, Price's Mill in Simpson County, Reese Woolen Mill in Russell County, Riffe Mill and another unnamed mill in Casey County, and Ritter's Mill in Barren County. Other standing mill structures include a mill on the Xalapa Farm in Bourbon

County (now used as a place for private parties), Pettit's and Grimes' Mills in Fayette County (Amos and O'Malley 1991), and others. Bevins (1981) identified additional mill sites in Scott County, including Leatherer's/Lemon's Mill, Shannon's Mill, DeGaris Mill, Beatty's Mill, Thomson's Mill, and the Craig/Johnson Mill. Her unpublished research indicates that many other mills once operated in the county (Ann Bolton Bevins 1983, personal communication).

Hockensmith (1993; 1994) has researched the millstone quarries that operated in Kentucky as well as compiling bibliographies on millstones quarries elsewhere. An unusual conglomerate rock was mined in Powell County, Kentucky for shaping into millstones. Another popular mill stone type was the French buhr stone, made by cementing shaped blocks together.

The Establishment of Water Powered Mills and Associated Laws

As soon as conditions improved on the frontier, water powered mills with vertical wheels were built. For most areas, this development began in the 1790s. The Fort Knox area was well suited to the establishment of mills because of the major water courses (Salt River, Rolling Fork and Otter Creek) that run through it. These major rivers and their tributaries supported numerous mills throughout Bullitt, Hardin and Meade counties. As more and more mills were built, the harnessing of the water power to run them required that the General Assembly enact laws to protect neighbors to the mills from injury (owing to water diversion, etc.). Prior to the formation of Kentucky as a separate state, people had to petition the Virginia General Assembly on matters concerning mills. Bourbon County citizens petitioned in 1790 that mills be allowed on the Stoner and Hinkston Forks of the Licking River "on every Convenient place" with the further requirement that the dams have locks or slopes that permitted boats to pass over them (Robertson 1914:144-145).

The second session of the Kentucky Assembly resulted in "An Act more effectually to prevent obstructions in water courses", approved on December 15, 1792. The purpose of the act was to insure that the navigable rivers and creeks of the Commonwealth be kept "free and open for the passage of fish, and the transportation of the growth and produce of this country" (Kentucky Acts 1792: 38). The act prevented the construction of fish dams, slopes, stops, weirs, hedges or any other construction that prevented the passage of fish or boats, and attached a fine of \$2.00 per twenty-four hours for offenders. This legislation did not intend to prevent the construction of mill dams for the purpose of "working any grist mill, or other water works of public utility" and referenced an act of the Virginia assembly that had been adopted as part of Kentucky law after statehood. Essentially, the prospective mill proprietor had to apply for permission to the Kentucky Assembly to erect his mill and dam, and a survey for possible damages to his neighbors was usually carried out.

An act passed in February of 1797 spelled out the procedure in great detail and passed the permitting power to the county courts. This act specified that a person owning lands on only one side of a watercourse had to make an application for a writ of *ad quod*

damnum to the county court for the opposite side. After a writ was issued, the sheriff was authorized to empanel twelve "fit" persons to meet at the location where the dam was proposed.

The freeholders taken shall be charged by the sheriff impartially, and to the best of their skill and judgment, to view the said lands so proposed for an abutment, and to locate and circumscribe by certain metes and bounds, one acre thereof, having due regard therein to the interest of both parties, and to appraise the same according to its true value, to examine the lands above and below of the property of others which may probably overflow, and say to what damage it will be of to the several proprietors, and whether the mansion-house of any such proprietor, or the offices, curtelages or gardens, thereunto immediately belonging, or orchards, will be overflowed; to enquire whether, and in what degree, fish of passage or ordinary navigation will be obstructed; whether by any, or what means such obstruction may be prevented, and, whether, in their opinion, the health of the neighbours will be annoyed by the stagnation of the waters (Kentucky Acts 1797:196).

The findings of the committee were then returned by the sheriff to the court, and any affected parties were given the opportunity to respond to them. A similar procedure was required when the prospective mill builder owned land on both sides of the creek. The committee could recommend that a mill not be built, or they could approve the construction, sometimes stipulating that a neighbor be paid compensation for loss of land or land use because of flooding or some other outcome resulting from the mill.

The law also allowed for contingencies such as failure to complete the mill within three years, or to keep it in good repair, or to rebuild it within one year if it was destroyed. The acre of land that was taken from the opposite landowner would revert back to that owner in those cases. Having laid this groundwork for an orderly procedure to approve mill construction, the act also specified that the law did not bar any prosecution by a party who chose to bring suit.

The remaining sections of the act specified a variety of requirements for the miller. Millers were required to "well and sufficiently grind their grain", taking as toll "one-eighth part and no more" of all grain to be ground into meal, and one-sixteenth part of the grain intended for hominy or malt (Kentucky Acts 1797:198). For every infraction of this law, a fine of fifteen shillings was levied. Millers were also required to keep sealed measures of a half-bushel and a peck as well as a "toll-dish", and to "measure all grain by strike measure", again with a penalty of fifteen shillings for each infraction (Kentucky Acts 1797:198). The penalty sections both allowed that the miller might be a slave or an indentured servant in which case the master or owner was liable for the fine.

An interesting provision involved the keeping of swine. Swine were prohibited to run loose on mill sites where the owner had less than fifty acres. This provision was apparently

"oppressive to a number of our citizens" because it was amended in 1803 to read that no owner of any mill within the limits or within a mile of any town was allowed to let his swine run at large (Kentucky Acts 1803). The keeping of swine at mill sites made sense because part of the byproducts of grinding grain was offal, which was suitable only for animal feed.

Another section of the law dealt with repairs to dams over which public roads passed. The dam owner was required to keep the dam in repair "at least twelve feet wide at the top through the whole length thereof, and shall keep and maintain a bridge of like breadth with strong rails on each side thereof over the pier head, flood gates or any waste cut through or round the dam" (Kentucky Acts 1797:198). In the event that the dam was washed away, the owner had a one-month grace period to make repairs sufficient to allow him to grind one bushel of grain. Over the next few years, additional acts were passed for specific river drainages (Kentucky Acts 1799; 1801). The next change that affected all mills was a provision prohibiting any person, "contrary to the will of the owner", from making or carrying fire within twenty yards of any grist mill or other water works (Kentucky Acts 1810:98-99).

Several later acts continued to deal with problems on specific water courses. The Rolling Fork was mentioned in one of these amendments, dealing with the injury mill dams caused to navigation of these streams (Kentucky Acts 1817:28-29; 1825:93). The area designated for navigational controls was upstream from the Fort Knox part of the Rolling Fork.

Mill Construction and Products

Grain was not the only product to be processed in a mill. Milling equipment was also used to produce wooden boards, gunpowder, textiles, and a host of other products. The principal products generated by mills in the Bullitt, Hardin, and Meade county area were meal or flour, animal feed, boards, cordwood, wool rolls, various kinds of woven cloth, and, at an early date, gunpowder (Holmberg 1991; Coxe 1814; various federal manufacturing census returns). About the time Kentucky's milling industry was getting underway, Oliver Evans, a Delaware-born inventor and millwright, was developing the system of "continuous flow milling" in which the milling process could be completely mechanized. First published in 1795, Evans' book, The Young Millwright and Miller's Guide, compiled many principles of milling that had been worked out by trial and error over the centuries and synthesized them into a system whereby the milling process was automated. Other useful references utilized in this discussion include Leffel (1881), Hunter (1979), Howard (1983), Fairbairn (1864), Storck and Teague (1952), Garber (1970) and various issues of Old Mill News.

To build a water powered mill, several factors need to be taken into consideration. The site of the mill must have an adequate source of running water of sufficient velocity to turn the mill wheel. While Kentucky had abundant water sources, they were not always reliable year-round, leading to situations where some mills could only operate during the wet seasons, or at less than full-time on an annual basis. The construction of dams to collect and

hold water until it was needed helped to extend the number of hours a mill could operate continuously. Dams could be constructed of stone or timbers or both. Their configurations depended on the site characteristics. If a stream had a stable stone bed, dams could be securely anchored to the stone by log crib or stone abutments or tied in directly. Specific configurations met the needs of specific sites such as narrow streams. Leffel (1881) devoted considerable discussion to the construction of dams (also called weirs). He described rip-rap, crib, stone and iron dams as well as types appropriate for rock stream beds and narrow streams. He used the dam at the George B. Macklin flour mill near Frankfort, Kentucky, as a good example of a stone dam. Dams built of logs attached to stone abutments were a common type at Kentucky mills during the early to mid nineteenth century. Stone and/or concrete dams were frequently built (often to replace earlier log dams) during the late nineteenth and early twentieth centuries at the large merchant mills that dominated the milling industry during this time period.

Regardless of the type of dam constructed, all mill dams had to be built so as to guard against certain dangers. Evans (1795:199) cautioned that dams should be constructed "so, that the water, in tumbling over them, cannot undermine their foundations at the lower side. . . and so that heavy logs, or large pieces of ice, floating down, cannot catch against any part of them, but will easily slide over". He also advised that dams be built so that the pressure of the water would cause their parts to press together, and that there be "a sufficient tumbling space to vent all the water in time of freshets" as well as making the abutments high enough so that freshets would not cause water to overflow them (Evans 1795:200). Finally, he advised that the dam and mill be sited at sufficient distance from one another so that the dam would cause water to rise into the mill during times of high floods (Evans 1795:200). He advanced other practical advice for building mill walls, keeping the mill in order, avoiding accidents that could set the mill on fire and improving millseats (Evans 1795:201, 272-275) as well as an abundance of specific construction techniques for all aspects of mills.

Former dam locations can sometimes be identified if stone or earthen abutments survive. Roads leading to mills sometimes crossed the stream associated with the mill by crossing at the dam which created a fording place on its downstream side. On streams that experienced sudden and drastic increases in water velocity during wet weather, a second dam was often built upstream of the main dam to catch the brunt of the water and prevent it from washing out the main dam (Fairbairn 1864:87). Locales in which water levels dropped due to elevational changes were prized for mill sites because of the greater energy that could be harnessed there by using gravity.

Water was delivered to the wheel in a variety of ways. The water was sometimes forced into a millpond for storage, then diverted to a mill race or a sluice to deliver it to the wheel. Mill races were excavated ditches of varying lengths; sluices were often built of wood and served to direct and control the water falling against the wheel. Fairbairn (1864:91) discussed the difficulty and expense of constructing adequate conduits or lades by which the water was discharged upon the wheel.

By the construction of a weir we may have dammed back the water half a mile or a mile, and formed the upper part of a stream into a reserve from which the supply of water can be drawn and two or three feet or more of fall gained; but unless the mill is built close up to the banks of the stream, head courses, canals and tail races have to be cut in order to make the fall available, and these conduits are not unfrequently [SIC] as difficult of construction and as expensive as the weir.

Water considerations weighed heavily in decisions concerning the type of wheel best suited for a specific site (Hunter 1979; Storck and Teague 1952). Wheels set horizontally in the water characterized tub mills, and foreshadowed the development of the turbine in the nineteenth century. They embodied the direct-drive principle since the shaft on which the wheel was seated also turned the millstones. Flutter wheels, often used in saw mills, had long narrow paddles attached to a horizontal shaft which was turned entirely by the force of the current hitting the broad side of the buckets. Vertically set wheels were much more efficient and took several forms. The energy produced by the turning wheel then had to be transmitted to a vertical shaft by use of gears and shafts arranged as a power train. These basic principles of power generation, transmission and use had to be met regardless of the type of wheel used. Vertical wheels, while more complex in their mechanical engineering, were much more efficient.

Vertical wheels took three essential forms, termed undershot, overshot, and breast wheel types (Howard 1983). These terms refer to the location on the wheel where the water first struck. An undershot wheel was turned by water striking at its base, causing it to turn with the current. It only has about a 30% efficiency rating but it can be adapted to many sites with greater ease and less complex modifications than other wheels. It was very commonly employed in Kentucky mills since it could operate in shallow water.

The overshot wheel is turned by water striking and filling its buckets at the top of the wheel, using gravity as well as the water velocity of the initial collision to rotate the wheel. This arrangement causes the wheel to revolve in a direction opposite that of undershot and breast wheels. The water in the buckets spill out after a third of a revolution (Garber 1970:136). While this wheel type is very efficient, it has more rigid site requirements, needing a greater amount of "head".

The breast wheel is an intermediate form in which the water strikes the buckets at the rear of the wheel below its axis, turning the wheel against the current, and retaining water in the buckets for only a quarter of a revolution (Garber 1970:132). Its efficiency rating was between that of the undershot and overshot wheels. The three wheel types all are classifiable as gravity or impact wheels since the weight of the falling water supplies all the motive power.

The early mill wheels were made of wood, sometimes entirely, although the use of metal gudgeons applied to the shaft ends and axle areas was common. The use of metal had

to be carefully controlled because of the danger of sparks causing spontaneous combustion of the flour dust that proliferated in grist mills. Sparks were a potentially fatal disaster in gunpowder mills because of the explosive nature of the product. Wood had some drawbacks, principally swelling and shrinking and the wear and tear that accompanied constant movement and friction. However, it was the dominant material for wheels for hundreds of years, supplanted in the latter part of the nineteenth century by the development of steel wheels.

The turbine wheel operates by water pressure in which water forced into the wheel under pressure exerts force on the buckets as it exits. Turbines were developed in America during the first half of the nineteenth century and were widely adopted later in the century. Turbine wheels were often turned by steam, an innovation that greatly expanded the number of suitable sites for building mills since water velocity and fall were no longer a consideration.

Once the wheel was in motion, the generated energy had to be transmitted to the millstones. This was generally accomplished by using shafts and gearing to transmit the power to a vertical shaft. In order to decrease the torque or twisting stress on the horizontal axle of the water wheel, a gear was mounted as close as possible to the water wheel, driving a large spur gear that in turn drove another gear on the lower end of the grinding stone shaft. This gearing system also allowed the disengagement of the millstones without stopping the water wheel as well as greater control over the grinding speed (Storck and Teague 1952:99). Early gears were made of wood in two forms. A lantern pinion consisted of two solid discs with wooden staves set between them; this type of gear was usually used for small gears. A spur gear was made by setting a row of upright pegs in a single flange and served for large gears (Storck and Teague 1952:101).

Once the gearing system was in place, power could be transmitted to any number of machines. The most common type of mills in the Fort Knox area were grist and saw mills. Grist mills employed millstones to grind their grain prior to the development of rollers in the late nineteenth century. Millstone material had to meet very specific requirements and proper stones often were imported. Kentucky's eastern mountains region contained rock formations that made good millstones for corn mills (Hockensmith 1993), but many mills ordered their stones from Europe. Two stones were required to make a "run". The under or bed stone of the pair did not move during the grinding process. It was seated in a timber frame with packing pieces placed around it to hold it in place. The runner stone was mounted on a shaft and balanced very exactly over the bed stone without touching it. The stones also had to have furrows cut in them to properly grind the grain; this process was called "dressing the stone". An expert dresser had to have intimate knowledge of how to dress his stones so that they remained sharp. Well dressed stones ground grain by shearing action and the furrows directed the flour or meal to a spout for collection and further processing if necessary.

American mills used the "flat grinding process" which stressed quantity over quality

(Dedrick 1991). This process was intended to make all the flour possible at the first grind, and to avoid having to regrind the incompletely ground grain (called middlings). Soft winter wheats ground to a white flour and a broad bran, with very little middlings, and was the preferred grain for wheat flour for many years. Flat grinding also produced a very hot meal or "chop" that was difficult to sieve because of the moisture it contained. It had to be dried before going to the bolting cloths (sieves used to sift the flour to different grades).

After the grain was ground, it had to be purified and dried. The traditional way of accomplishing this phase was to spread the warm, damp "chop" on an upper floor of the mill to dry. Once it had dried, it was swept up and sent to the bolters. Not only did this method create hazardous dust conditions, it was probably rather unsanitary.

One of Oliver Evans' inventions was the hopper boy which was a rotary device that stirred the meal around in a hopper to help it dry (Hazen 1995). It then could be sent to the bolting screens to be sieved. Transportation of grain and the ground products had always been a manual operation until Evans developed several machines that carried the grain, flour or meal to different parts of the mill for different processes. The bucket elevator, the screw conveyor, the drill and the descender all contributed to more efficient collection and transport of mill products in the mill itself.

Saw mills used various types of saws to cut wood into boards. The up-and-down saw was a simple machine but it took a long time to cut a log (Garber 1970:32). The circular saw was invented around 1814 and saw very widespread use (Garber 1970:31). The band saw was invented in 1818. Lathes could also be attached to milling machinery to turn wood into spindles, table legs, etc. During the nineteenth century, portable saw mills were developed that could be taken to the wood source and set up for on-the-spot processing.

Other milled products such as textiles required the milling machinery to be connected to spinners and looms. Gunpowder mills used mortars and pestles powered by mill equipment to pulverize and mix the raw ingredients. Virtually any process that required repetitive regular motion could be achieved in a mill.

MILLING IN THE FORT KNOX AREA

County court order books and the legislative acts of the Kentucky General Assembly were consulted to compile lists of mills established in Bullitt, Hardin and Meade counties. Mention of mills entered these records because the mill owner or proprietor had to request an *ad quod damnum* (a writ of condemnation) so that he could build a mill dam. Commissioners were appointed to view the prospective mill dam site to determine if any of the neighboring landowners would suffer any damage or injury to their land and land use as a result of the mill's establishment. Tabulation of mills in Bullitt, Hardin and Meade counties from the federal manufacturing census provided information not only on who operated mills but also data on the mills themselves. These data for all three counties are presented in Appendix A. Statistics in these censuses are useful for assessing the types of milling facilities, the products generated, capital investment and expenses, employment and

other aspects of milling in the tri-county area. Population censuses for the years 1850, 1860, 1870 and 1880 were also reviewed to compile lists of individuals who reported a milling-related occupation. These statistics are presented in Appendix B.

Manufacturing Statistics for Mills in Bullitt, Hardin and Meade Counties

Only Bullitt county listed mills in the 1820 census. The four mills listed all were grist mills. None of them had more than a single pair of millstones; however, Nathan Harris processed twice as much wheat as the other three. Evans' innovations were apparently utilized as three of the mills used elevators for transporting their product through the mill. Wheat cost \$.75 per bushel and was worth \$5.00 per barrel after grinding. A bushel contained 60 lbs. and a barrel weighed 196 lbs. Converting to pounds, unprocessed wheat cost one-and-one-quarter cents per pound, and was worth two-and-one-half cents as processed flour. However, the grinding process generated a certain amount of waste and the extraction was not 100%. Calculation of extraction rates for the four mills results in a rate of approximately 65% which was standard for the time. The mills employed a maximum of two men and reported annual wages that fluctuated from a low of \$50.00 to \$300.00. Capital investment for three of the mills ranged from \$3800 to \$4800, the exception being N. Harris who had an investment of \$7750 in his mill. He also produced more flour and may have had more technological improvements. All of the mill owners reported that the demand for flour had decreased and sales were "dull".

Manufacturing censuses are not available again until 1850. The data for the tri-county area indicate that mills were distributed throughout the counties, each serving a relatively small market area. The manufacturing census is not a comprehensive list because mills had to have shown an annual production value of \$500 or more. This condition was specified in the 1880 census and similar restrictions may also have applied to earlier census years.

Hardin County led in frequency of recorded mills with eleven sites, followed by Bullitt with five mills and Meade with three listings. Merchant milling is specified for many of the listings; this term refers to the grinding and shipping of grain or grain products commercially as opposed to "custom" milling which served local customers bringing their own grain to the mill. Water continued to provide the motive power for the majority of recorded mills in 1850, but several steam powered mills were also in operation. Saw and grist operations at the same mill occur in two cases, while one listing indicated a complex that ground grain, distilled liquors and had a blacksmithing facility.

Extraction rates appear to have remained fairly constant from 1820 to 1850. The percentage increase in value gained by grinding wheat to flour fluctuated from no gain at all to 29%. A pound of corn apparently ground to a pound of meal without waste. Only one of the three mills grinding corn showed a percentage increase in the value of the cornmeal; this mill gained 27% in meal value. The other two listings indicate either no gain or a loss.

Sawmill operations in 1850 appear to have been generally small businesses with good profit margins. The value of processed lumber was three times that of the unprocessed logs in two instances. Collins Fitch's sawmill reported a fivefold increase in value for the lumber produced.

The 1860 manufacturing census listed only twelve mills for the entire tri-county area which probably was a result of underreporting rather than an accurate reflection of mills in operation. The combination of grist and saw operations is more common in this census, perhaps reflecting a need to offer more than one service at a mill to make it profitable and to take advantage of the seasonal limitations of some of the raw materials. A wool carding mill is mentioned in this census. Capital investments vary widely from a low of \$1000 to a high of \$10,000. Most of the listed mills were water powered with only three using steam engines. One mill used water power for grinding wheat, steam power for grinding corn, and horse power for grinding rye and buckwheat. Percentage increases in value for wheat to flour ranged from 12% to 32% and from no gain to 31% for corn to meal, using the values listed for three mills. The profit for sawing logs continued to be high, with three mills reporting board values that were three to four times higher than the costs of the unprocessed logs.

By 1870, mills in the tri-county area had increased to 43 sites, with 22 mills using steam engines, two using both steam and water power, and the remainder water. This census provided more information on the mills concerning the number of months they operated out of the year, and some information on their physical plant. Only five mills reported year-round operations; the remainder operated from three to eleven months. Percentage value increases for the finished products ranged from no gain to 23% for wheat to flour, 6% to 45% for corn and 4% to 44% for combined grains. Distinctions were made between custom and merchant grinding; generally speaking, custom grinding was more profitable. Sawmill operations continued to be profitable, and the number of mills solely involved in lumber proliferated. The value of the processed logs ranged from 1.5 to 9.6 times the value of the unprocessed logs.

Mills listed in the 1880 census were enumerated by smaller precincts than previous years. Data for this year include more information on mechanical equipment than any other year. The Pine Tavern District included the Bullitt County part of the Fort Knox area. The three mills listed in this district were all saw mills using steam engines. The Hardin County section of Fort Knox was probably in the Atcher, Colesburg, West Point and Red Hill Districts. The six mills listed in these districts were also all saw mills, mostly run by steam except for two water powered sites. The Meade County section of Fort Knox was in the Garnettsville and Grahamton Districts which listed nine mills. Three saw mills were listed, one of which was struck out because it only operated one month out of the entire year and did not meet the minimum annual value required. The profits on sawmilling continue to be high with a range of 1.7 to 2.8 times the value of the logs.

Grist mills in the Garnettsville and Grahamton Districts included mills of Doe Run

and Otter Creek, all run by turbine water wheels. Most of these mills were operations with fairly substantial annual product values of up to \$41,000 although they did not employ more than six people at maximum. Grain product values were usually combined in this census, but the percentage increases in flour/meal values ranged from 14% to 29%. Some of the mills in other districts specified certain kinds of wheels such as the Leffel and Parker wheels. The Parker wheel was a reaction wheel developed by Zebulon Parker, an Ohio miller. It is considered by some researchers to be the forerunner of the scroll case turbine (Hunter 1979). The Leffel wheel was a type of turbine wheel.

The adoption of more efficient wheels, and particularly the conversion to a turbine wheel, marked a transition from the country grist and saw mill with its relatively simple machinery to the merchant mill, built on a larger scale, oriented toward the market and highly profit-motivated. The rise of merchant mills in the tri-county area was more evident in the urban centers (such as the roller mill in Stithton) or along the more reliable streams. They filled the demand for their products for a larger service area than the small country mills could ever do. Ultimately, the smaller mills could not compete and they closed.

Employment Statistics for Mills in Bullitt, Hardin and Meade Counties

The manufacturing censuses indicate the number of employees for each mill as well as their wages, expressed as an annual or monthly total, depending on the year. In 1820, the four mills in Bullitt County employed a total of seven men, two each at three mills and only one at the fourth. Annual wages varied from \$50.00 for the single employee at P. Smith's mill, to a high of \$150.00 each for the two men employed at E. H. Hambleton's mill which did not operate fulltime. These wage differences are difficult to explain since the census does not indicate how many months during the year the mills operated.

In 1850, employment statistics specify wages by the month but do not give an annual total. Wages at five reported steam powered mills ranged from \$10.00 to \$16.00 per month for each employee with the number of employees per mill ranging from one to eight, averaging 4.2. Fifteen water powered mills reported a range of one to five employees per mill, averaging 2.4 employees. Wages ranged from \$8.00 to \$20.00 per employee on a monthly basis, averaging \$13.70. One steam and water powered mill employed ten men at \$20.00 per month per employee.

The 1850 population census lists 46 men who declared a milling related occupation. Eleven of these individuals also owned real estate but these names did not correspond exactly to the names in the manufacturing census of the same year. For instance, of the five mills listed in the manufacturing census for Bullitt County, only three are listed as millers in the population census and one of these did not declare any real estate value. In Hardin County, five out of eleven mill operators listed in the manufacturing census also are listed as millers in the population census, and all reported real estate values. Three mills in Meade County are listed in the manufacturing census but none of the operators appear as millers in the population census. For the three counties collectively, four men identified themselves as

millwrights which was a job that required special knowledge and training in the installation, maintenance and repair of milling equipment. These men were not among the owners of the mills, did not report any real estate values, and may have serviced all the mills in the area on an "as needed" basis.

In 1860, the number of employees for steam powered mills ranged from one to six and averaged 2.6 men, each making an average of \$27.40 per month. Employees at water powered mills ranged in number from one to five, and averaged \$22.71/month. In both data sets, the average wage is raised by a single instance of a much higher wage paid. A steam powered saw and grist mill operated by A. W. Swearingen in the Mt. Washington district paid three employees \$45.00 per month while other mill workers were only being paid \$20.00-\$25.00 per month. Among the recorded water powered mills, one saw and grist mill operated by John Milburn paid a single employee \$40.00 per month. Average wages at the other water powered mills ranged from \$15.00-20.00 per month.

The 1860 population census lists 120 individuals that reported a milling related occupation. Of this total, 35 reported real estate values. The significant increase in millers, millwrights and millworkers is attributable to a fivefold increase in individuals with milling occupations from 1850 in Meade County, largely due to the operation of the Grahamton Textile Mill and the mills in and near Brandenburg. Although only four mills were reported in Meade county in the manufacturing census, the population census indicates that there were others that perhaps did not meet the minimum annual value requirements to be listed or were simply missed by the census taker. Of the twelve mills listed in the manufacturing census for 1860, seven of the proprietors also reported a milling occupation in the population census. The number of millwrights increased to ten in the tri-county area, reflecting the increase in mill sites and the greater need for trained technicians.

In 1870, a total of 108 individuals were listed with a milling occupation, with Hardin County leading with 50 men, Meade County with 32 and Bullitt County with 26. Of the total, 39 individuals reported real estate values. Of the 43 mills listed in the 1870 manufacturing census for the tri-county area, fourteen are also represented in the population census by proprietors who reported a milling occupation and who lived in the same county as their mill. Only two men reported their occupation as millwright. As many of the mills in operation were saw mills and steam engines were in more frequent use, the demand for millwrights may have declined.

At least 112 individuals were employed in milling occupations in 1880 in Bullitt, Hardin and Meade Counties. By this year, the establishment of the cotton mill at Grahamton employed 29 of the 45 people in Meade County identified as mill workers. Much of the increase can be attributed to the continued importance of sawmilling. Millwrights were few in number as in 1870.

PREVIOUSLY DOCUMENTED MILLS IN THE FORT KNOX AREA

In 1979, the University of Kentucky contracted with the Fort Knox Armor Center to conduct a reconnaissance survey of a stratified random sample of 25 percent of the post's hunting areas never used as grenade ranges (O'Malley et al. 1980). This survey, which covered over 20,000 acres, documented 381 sites containing prehistoric and/or historic components. Four sites were tentatively identified as mills, including three on Otter Creek and one on Mill Creek. These sites were recorded under the permanent site numbers of 15Hd253, 15Md164, 15Md176 and 15Md185. Sites 15Md176 and 15Md185 were located within the limits of the former town of Garnettsville. The Grahamton Mill Complex, located on Otter Creek, was visited during the survey but not formally recorded at that time. It has since been recorded under the number 15Md378. Appendix C contains maps of all previously recorded mill sites.

In 1986, the private archaeological firm of Garrow & Associates conducted an archaeological survey of an area that was slated for potential impact by the reconstruction of State Highway 1638 in Meade County (Webb et al. 1986). The planned road improvements were to realign the highway. As a result of this survey, Sites 15Md176 and 15Md185 were revisited. Site 15Md176 was found to be located within the area of the preferred alternate. Documentary research on the site's ownership history and additional field excavation were recommended for this site.

In 1987, a program of archaeological testing was conducted in the former town of Garnettsville (Wheaton 1987). Site 15Md176 was originally slated to be tested but a reassessment of the realignment corridor found that the site was outside the area of impact. The researchers also corrected the published location of the site which placed it on an intermittent waterway rather than the larger permanent stream where it was actually located. As a result of this testing program, a partial sketch map of Garnettsville, first presented in the survey report of 1986, was further enhanced with the location of additional archaeological features (largely structural) associated with the town on the north side of Main Street. The testing report also expanded upon the history of Garnettsville first presented in Webb et al. (1986). Numerous historic maps were discussed and several mills were mentioned in the text of this historic overview. Specifically, Site 15Md185 was identified as the "Garnettsville Mill" by a local informant. Other mills identified along Otter Creek included those operated by Tandy Fitch, B.M. Tracy and Son (later owned by a Mr. Umensetter), and Samuel P. Sterrett (first owned by Isaac Overton). The Grahamton Cotton Mill also was mentioned in this report.

In 1991, James J. Holmberg prepared a historical report on the four Otter Creek sites first recorded in 1979 by the University of Kentucky for the U.S. Army Corps of Engineers in Louisville. Holmberg (1991) concluded that Site 15Md185 and the Grahamton Mill were definitely water-powered milling facilities; that Site 15Md164 might be a mill; and that Site 15Md176 could not be definitively identified as a mill. His report included a section on regional mill/waterpower studies and chains of title for each site.

Site 15Md185 was identified as the main mill in the town of Garnettsville, and the chain of title indicated that it had been "known at various times as Grable's, Garnett's, the Garnettsville, Wither's, and Young's mill" (Holmberg 1991:33). The earliest date for this mill was 1806 when it was mentioned in connection with a road in a Hardin County court order book (Holmberg 1991:37-38). Holmberg speculated that the mill ceased operation around the turn of the twentieth century, but interviews conducted since his study indicate that milling continued until the 1920's or 1930's (Kempf 1996:203-204). After it ceased to be used as a mill, it became a "place of entertainment", according to a former resident (Kempf 1996:204).

Sawn lumber and corn meal were the mill's major products. The mill was censused in 1870 and manufacturing statistics were recorded. In 1870, the Garnettsville mill, then owned by James A. Withers, was powered by a 16 hp water wheel that apparently ran both the grist and saw milling. The saw mill used an upright saw operated by one man for eight months; the grist mill had one run of corn stones, also operated by one man for eight months. In 1870, the mill reported an annual product of 60,000 feet of lumber at a value of \$1050.00 and 1000 bushels of corn meal valued at \$650.00. The mill was apparently not censused in 1880. Test excavations conducted at this site as part of the present study are presented in a separate section of this report.

The Grahamton Mill was a major local employer for over one hundred years. The company owned the mill, a store and a few houses. It was such a large operation that a small town developed nearby where many of its employees owned residences. The mill complex included facilities for grinding grain and producing textiles. Its earliest date of establishment is 1814 when a grist and saw mill and a dam three feet in height were built by David Brandenburg. In 1835, a Jefferson County firm, Robert Graham & Company, transferred their textile production to the site, building a large elaborate facility. In 1837, George W. Anderson joined the company as a partner. His brother, James, was already a partner in the firm. Ownership of the company became concentrated in the hands of Robert Graham and the two Anderson brothers in 1840, and, by 1847, Thomas Anderson joined the company (then known as Graham, Anderson & Co.) as a majority owner. The next year, Thomas' son, W. George Anderson, was given his father's interest in the company and was actively involved in the mill's operation for many years under the firm name of W. G. Anderson & Company (after 1857). It continued to operate at a profit for many years but by 1904, business had seriously declined, and the stockholders voted to close the company. However, it was revived by its final owner and produced mainly mop yarns until 1940 when it closed permanently. The Grahamton mill complex was officially recorded under the permanent number of 15Md378 in 1994 by Fort Knox archaeologist Pamela Schenian and her staff. The site is also the subject of a publication compiled and prepared by Diana Burnett and Paul W. Urbahns in 1992, and published by the Ancestral Trails Historical Society, Inc.

Holmberg identified Site 15Md164 as possibly the mill operated by the Overton family (with occasional additional investors) from about 1808 to 1842, and by Samuel P.

Sterrett from 1842 to about 1884. This mill served as a nucleus for the small community of Plain Dealing, and produced flour and meal, sawn lumber and wool rolls. Holmberg's discussion of the site's chain of title indicates that he was not completely certain that Site 15Md164 was actually the mill itself but he felt that the deed descriptions certainly included the site. A 1981 survey report of Otter Creek Park that Holmberg was apparently unaware of (Hale 1981) identified a mill site (15Md248) as Overton's mill. Later research by Fort Knox archaeologist, Pamela Schenian, revealed that the Overton mill was indeed Site 15Md248, and that Site 15Md164 was a house. However, Holmberg's research still is useful for information on this mill.

Holmberg's research failed to unequivocally identify Site 15Md176 as a mill. This site consisted of a circular limestone foundation built into the side of a ridge. A supplemental appendix written by Donald B. Ball and included in Holmberg's report suggested that Site 15Md176 was a "groundhog" lime kiln.

The Stovall Mill (15Hd253)

As part of the present study, a chain of title was constructed for Site 15Hd253 to determine its owners. The federal government purchased the land on which the mill was located from George and Mary C. Knoop. The following deed abstracts present the chain of title from the present owner back through time.

Grantor: George and Mary C. Knoop (of Hodgenville)

Grantee: United States of America

Date: June 25, 1942

Reference: Hardin County Deed Book 107, page 337

Price: \$4150.00

Size of tract: 154.3 acres

Description: Situated in Hardin County, Kentucky, east of Mill Creek and about 3/4 mile south of the Hibbs County Road, and more particularly described as follows: Beginning at a point, the same being a westerly property corner of Elmer Masters and an easterly property corner of James W. and Louise Hargan and in the center line of Mill Creek; thence with the easterly property line of James W. and Louise Hargan and the center line of Mill Creek, the following courses and distances: N 9 1/4 deg. W 10 poles, more or less, N 23 1/2 deg. W 16 poles, more or less; thence leaving Mill Creek and continuing with the easterly property line of James W. and Louise Hargan, the following courses and distances: S 85 3/4 deg. E 19 poles, more or less, N 85 deg. E 11 poles, more or less, N 3/4 deg. E 4 poles, more or less, N 11 1/2 deg. W 31 poles, more or less, N 9 3/4 deg. W 60 poles, more or less, N 2 1/2 deg. E 57 poles, more or less; thence continuing with the southerly property line of James W. and Louise Hargan, the following courses and distances: S 76 3/4 deg. E. 34 poles, more or less, N 86 1/2 deg. E 138 poles, more or less, to a point, the same being in a westerly property line of W. B. Garner; thence with the westerly property line of W. B. Garner, the following courses and distances; S 23 1/2 deg. E 80 poles, more or less, S 66 1/2 deg. W 16 1/2 poles, more or less, S 25 1/2 deg. 3 1/2 poles, more or less, to a point,

the same being a northerly property corner to Elmer Masters; thence with the northerly property line of Elmer Masters, S 58 1/4 deg. W 133 poles, more or less, S 74 3/4 deg. W 84 poles, more or less, to the place of beginning. . .

Grantor: George W. Parrott (of Louisville)

Grantee: George Knoop (of Jefferson county)

Date: July 15, 1929

Reference: Hardin County Deed Book 86, page 401

Price: \$1.00 and other good and valuable considerations; assumption of indebtedness on the property in the amount of \$1300.00

Size of tract: 155 acres, more or less

Description: Beginning at a stone on the West Bank of Mill Creek, and thence S 23, E 5 and 1/3 poles; thence S 14 and 1/2 E 12 poles, to Northwest corner of lot No. 5 in the center of the Creek; thence N 73 E 83 poles to a small Hickory on the North side of a Hill; thence N 55, E 132 poles to a stone in Master's line; thence N 27 W 4 and 1/2 poles to a dogwood, corner to J. A. Master's; thence N 64, E 17 poles to a white oak; thence N 25 W 10 poles to a hickory; thence N 22 and 1/2 W 69 poles to an elm; thence S 83 W 138 poles to 2 Cedars; thence N 75 W 35 poles to a stone; thence S 1 and 1/2 W 55 poles to a Hickory; thence S 7 E 18 poles to a Poplar; thence S 11 and 1/2 E 44 and 3/5 poles to a stone; thence S 84 W 9 and 3/5 poles to a stone; thence N 2 and 1/3 poles to a stone; thence W 20 poles to the West Bank of Mill Creek; thence S 2 E 12 poles to the point of beginning.

Grantor: James and Nora Guest (of Louisville)

Grantee: George W. Parrott (of Louisville)

Date: March 20, 1929

Reference: Hardin County Deed Book 86, page 79

Price: \$1.00 and other considerations (assumption of loan)

Size of tract: 155 acres, more or less

Description: see Parrott to Knoop deed

Grantor: J.A. and Hattie Wheeler

Grantee: James and Nora Guest

Date: November 28, 1928

Reference: Hardin County Deed Book 86, page 78

Price: \$4969 in notes and equity on house

Size of tract: 155 acres, more or less

Description: see Parrott to Knoop deed

Grantor: D. B. and Mary E. Sims (of Elizabethtown)

Grantee: J. A. and Hattie Wheeler

Date: October 1, 1926

Reference: Hardin County Deed Book 82, page 506

Price: \$1.00 and assumption of notes

Size of tract: 155 acres, more or less

Description: see Parrott to Knoop deed

Grantor: H. S. and Elizabeth Fox (of Elizabethtown)

Grantee: D. B. and Mary E. Sims

Date: November 29, 1912

Reference: Hardin County Deed Book 61, page 179

Price: \$1.00 and assumption of notes

Size of tract: 155 acres, more or less

Description: see Parrott to Knoop deed

Grantor: John C. and Lena B. Masters (of Elizabethtown)

Grantee: H. S. Fox

Date: October 27, 1909

Reference: Hardin County Deed Book 57, page 85

Price: \$1000.00

Size of tract: 155 acres, more or less

Description: Beginning at a stone on the west bank of Mill Creek, thence S 33 E 5 1/3 poles, thence S 14 1/2 E 12 poles to N.W. corner of lot No. 5 in the center of the creek thence N 73 E 83 poles to a small Hickory on the North side of a Hill; thence N 55 E 132 poles to a stone in Master's line; thence N 27 W 4 and 1/2 poles to a dogwood, corner to J. A. Masters; thence N 64 E 17 poles to a white oak; thence N 25 W 10 poles to a hickory; thence N 22 and 1/2 W 69 poles to an elm; thence S 83 W 138 poles to 2 Cedars; thence N 75 W 35 poles to a stone; thence S 1 and 1/2 W 55 poles to a Hickory; thence S 7 E 18 poles to a Poplar; thence S 11 and 1/2 E 44 and 3/5 poles to a stone; thence S 84 W 9 and 3/5 poles to a stone; thence N 2 and 1/3 poles to a stone; thence W 20 poles to the West Bank of Mill Creek; thence S 2 E 12 poles to the point of beginning. . . together with any and all rights first parties have to the mill race and dam.

The title of this deed was derived from two deeds, consisting of a 33-acre tract from Elizabeth Scott and a 140-acre tract from Sarah J. Masters and heirs. Platting the metes and bounds of these deeds indicates that the mill site was located on the 33-acre tract.

Grantor: Elizabeth and James Scott

Grantee: John Masters

Date: October 20, 1902

Reference: Hardin County Deed Book 48, page 460

Price: \$300.00

Size of tract: 33 acres

Description: One tract of land, being lot No. 6 in the division of the real estate of John O. Stovall deceased as per deed of W.H. Gardner Commissioner of Hardin Co. to Elizabeth Scott Bounded as follows: Beginning at a stone on the West bank of Mill Creek J.O. Hibbs corner thence S 33 E 5 1/3 poles with the creek, thence S 14 1/2 E 12 poles to the N.W. corner of lot No. 5 in the center of Mill Creek thence N 73 E 83 poles to a small hickory on the North side of the Hill, thence N 55 E 132 poles to a stone in Masters line thence N

27 W 4 1/2 poles to a dog wood corner to J.A. Masters, thence N 64 E 17 poles to a white oak, thence N 25 W 10 poles to a hickory, thence S 84 W 124 poles to a white oak and walnut, thence S 6 E 82 poles to an ash, thence S 84 W 68 poles to a stone, thence N 2 1/3 poles to a stone, thence W 20 poles to the West Bank of Mill Creek thence S 2 E 12 poles to the beginning. . . The owner of this lot is to have the right away [SIC] of the Mill road and the use of the dam across the creek.

John Stovall is listed as having a saw mill on the Salt River in 1880 that operated eight months out of the year. The drainage name may be a mistake by the census taker since Mill Creek is a tributary of Salt River. The saw mill used a six horsepower water wheel to operate a circular saw. Logs were procured from the immediate vicinity and processed into boards and other remanufactures. In 1880, the one or two employees working at the mill produced 100,000 feet of lumber at a value of \$1500.00 from logs worth \$750.00. An additional \$40.00 was expended on supplies. Wages for the year amounted to \$200.00, leaving a profit of \$510.00.

Other members of the Stovall family, specifically James B. Stovall, who was John's brother, and Hezekiah Stovall, who was the two men's father, also were millers. James B. Stovall is listed in the 1870 manufacturing census as the proprietor of a grist and saw mill that used both water and steam engine power. The grist mill operated three runs of stones, grinding wheat, corn and other grains for eight months of the year. A 16 hp steam engine was also used, possibly for the sawmilling. A total capital investment of \$5000 (\$4000 for the grist and \$1000 for the saw mill) was reported. Annual merchant milling output amounted to 3000 bu of all grains (valued at \$2880) that ground to yield 490 barrels of wheat flour, 600 bu of corn meal, 700 bu of feed, and two tons of "offal" for a combined value of \$3870. Custom grinding ground 1800 bu of all grains (valued at \$1020) with the finished products worth \$1825. The sawmilling part of the mill processed logs worth \$1000 into 125,000 feet of lumber valued at \$2189. These efforts required nine men for eight months, possibly running the grist and saw operations simultaneously. Four men were paid \$440.00, three were paid \$340, and two were paid \$300 in total wages for the work period. James Stovall's mill census was taken in Haycraft's Precinct while his entry in the population census was enumerated under the Vine Grove post office jurisdiction.

In 1819, Hezekiah Stovall applied for a road to lead from his mill to Elizabethtown (Hardin County Order Book C-1:571). He owned land on Mill Creek and Dorret's Run. He may have been the one who built the mill on Site 15Hd253.

MILLS IDENTIFIED IN DOCUMENTS

This section presents the results of the documentary research that identified mills that were on water courses that flow through Fort Knox. These sites are presented by drainage. In some cases, the site locations are more precise than others. The level of certainty with regard to the site's location on Fort Knox also is variable. The following sites, however, represent the best estimate that could be made from the consulted documents. Budgetary

constraints limited the amount of deed research that could be accomplished. Another limitation was the poor quality of some of the deed records, and the inadequate descriptions of land tracts that precluded their being located on modern maps. The list of mill sites to research was compiled from a variety of sources previously mentioned in the methodology section. After the master list was compiled, mills that were on water courses that flow in Fort Knox were culled to make another list. The following major and/or named water courses are currently listed on the modern topographic quadrangle maps that encompass Fort Knox.

Bullitt County

Salt River

Tributaries on north side: Cedar Point Branch
Stowers Branch
Skinners Branch
Woodland Creek
Mud Creek
unnamed creek flowing from Rodgers Hollow, Raridan
Hollow and The Dug Hill

Tributaries on south side: all minor and unnamed

Rolling Fork

Tributaries on east side: unnamed creek south of Pitts Point (Brown's Run on
other maps)
Mud Run
Crooked Creek

Hardin County

Salt River

Tributaries on south side: Bee Branch
Mill Creek
Johnson Branch
Tollgate Creek
Dorret's Run
Buffalo Branch
Sanders Spring Branch
Douglas Branch

Rolling Fork

Tributaries on west side: Cedar Creek
Flat Lick

Tioga Creek

Tributary: Poplar Springs Branch

Abraham's Run
Tributary: Tioga Springs Branch

Meade County
Otter Creek

Tributaries: Dry Branch
McCracken Springs Branch
Gander Branch
Hog Hollow Branch
Potter's Creek

While some of these creek names may have been known by other names at various times, the major water courses were named at an early date and retain their original names. Rolling Fork was sometimes lumped under the Salt River in some early records but this usage does not seem to be extensive. Crooked Creek was also called Cedar Creek at an early date, but was distinguished by its present name by the early nineteenth century. After eliminating mills that were on other water courses that clearly were not part of Fort Knox, the following list resulted. The drainages of Mill Creek and Cedar Creek in Hardin County are almost completely contained within Fort Knox. Mills listed on these drainages are highly likely to be within the military reservation. Much of the Otter Creek drainage is also within the military reservation. The Salt River and Rolling Fork have much more extensive drainages that flow out of the tri-county area; mills listed for these drainages have a higher probability of being outside the post.

Mill Reported on Brown's Run (Bullitt County)

Name illegible 1880 Federal manufacturing census

This mill was a steam powered operation. It may not have been near a source of water since it did not require a water wheel. Brown's Run is a tributary of the Rolling Fork that is located south of Pitts Point and which flows in a westerly direction. Since the owner's name could not be deciphered, this site could not be researched. Owners at the time of Army acquisition along Brown's Run were William B. Sherrard, Mary Dawson, R.L. Bailey, Charles William Dawson and Clarence Dawson.

Mill Reported on Buffalo Creek

William Bush February 22, 1839 Hardin County Order Book I:88

This mill tract encompassed 105 acres; permission for two dams was requested. A deed of partition that subdivided Bush's extensive landholdings among his heirs after his death indicates that Buffalo Creek is a branch of Severns Valley Creek (Hardin County Deed Book U:179). Severns Valley was the term applied to the area around Elizabethtown. This mill was in that area. No other mills were documented on the Buffalo Branch that is a

tributary of Salt River.

Mills Reported on Cedar Creek (Bullitt County)

Benjamin Summers February 8, 1808 Bullitt County Order Book B:15

In 1808, Summers was issued a writ to erect a water powered grist and saw mill on Cedar Creek. He owned land on both sides of the creek. In 1805, Summers had purchased land on Cedar Creek from Peachy Willis (Bullitt County Deed Book A:10); the description of this property is not specific enough to place it on a map. A conveyance filed in 1812 transferred ownership of the land on which Summers was then living from William and Cynthia Pope, Warden and Elizabeth Pope and Robert Breckinridge to Summers (Bullitt County Deed Book B:615). The deed specified that this land was the same purchased from Peachy Willis. This transfer probably was done to clarify a title dispute. The land was part of John Larue's 21,000-acre survey. John Larue's land was located on Floyd's Fork of the Salt River. Floyd's Fork has a tributary named Cedar Creek on which Benjamin Summers' mill was probably located. This location is northwest of Fort Knox at the Bullitt and Jefferson Counties boundary.

<u>John Nusz</u>	March 17, 1845	Bullitt County Order Book G:361
	May 19, 1845	G:374
	April 20, 1846	G:424
	November 20, 1876	K:262

The 1840s entries concern the establishment of the Nusz Mill Road which connected to the Bardstown Road and ran down Cedar Creek. The road also reached Salt River at Greenwell's Ford. An entry on page 386 of Order Book G indicated that Nusz' Mill was formerly Temple's Mill. The 1876 reference mentioned Nusz' Mill as "old", indicating that it was probably not operational at that date. This mill probably was located in the Floyd's Fork drainage.

Samuel Simmons May 2, 1814 Bullitt County Order Book D:52
1820 federal census

This site was on Cedar Creek on the south side of Salt River. It was in operation in 1820 when the federal manufacturing census was taken. A check of deeds for Samuel Simmons indicated that he bought one tract on the Salt River from Henry Crist that was on about five-and-one-quarter miles below the mouth of Coxes Creek. This deed was filed in 1817 but was the land on which Simmons was living at the time. He may have leased the land initially and built his mill on it prior to actually taking legal ownership. The location of the Crist tract is a few miles west of Smithville which is very near the county boundary between Bullitt and Spencer. Appendix A includes manufacturing statistics on this mill. Simmons' property was appraised for his will in 1820, indicating that he died around that time.

Thomas Smith

February 27, 1798 Bullitt County Order Book A:66

Thomas Smith petitioned to build a water grist mill on his land in 1798. Thomas Smith died by December of 1800 when an inventory of his estate was taken (Bullitt County Deed Book A:186). He left a wife, Polly, and three children, William, Robert and Thomas. In 1808, his heirs had a tract of 365 acres on Cedar Creek sold at public auction (Bullitt County Deed Book A:273). It was purchased by Henry Crist. The tract description included a reference to a corner near the buffalo road about four miles northwardly from the Blue Lick Creek to land owned by Hardin. Blue Lick Creek is in northern Bullitt County near the Jefferson County line and the Cedar Creek mentioned in the order book entry is a tributary of Floyd's Fork. The 1820 federal manufacturing census reported a mill site owned by P. Smith (Appendix A). This individual may be Philip Smith who bought some acreage on Cedar Creek prior to 1820 (Bullitt County Deed Book A:193). The deed description was not very specific, but probably also referred to the Cedar Creek in the Floyd's Fork drainage.

Michael Troutman

November 6, 1809 Bullitt County Order Book B:98

December 4, 1809 B:107

February 3, 1810 B:111

February 5, 1827 E:85

These entries mention a writ of *ad quod damnum* that was eventually rescinded because Troutman never made a formal application. However, a mill was built before Troutman's death. Troutman died in 1814 in possession of a mill that was sold to Nathan Harris and then to Wilford Lee; it was on Crooked Creek.

Michael Troutman was a man of considerable means. His will, written April 10, 1814, bequeathed land, mills, slaves and money to his heirs. His son Philip received "the whole of my lands & mills on Cedar Creek in Bullitt county near Salt River" (Bullitt County Will Book A:161). While this description refers to mills in the plural, only one has been identified as possibly on the post. Philip Troutman sold the mill to Nathan Harris on December 2, 1818. This deed was not found but the transaction was described when Harris sold the mill property in 1826.

Nathan Harris was operating this mill in 1820 when he was included in the federal manufacturing census. The statistics on his mill have been previously presented. On July 14, 1826, Nathan and Mary Harris sold the mill and 100 acres as well as three other tracts of land to Wilford Lee (Bullitt County Deed Book F:172). This deed indicated the full chain of title from Michael Troutman's original purchase of land from John Whitaker to Philip Troutman's conveyance to Harris.

Wilford Lee still owned the property when he died in 1851. His deed of partition awarded the mill tract to his son, Charles Lee (Bullitt County Deed Book N:54-44). Charles Lee sold the property seven days later to Charles Lutes/Lutz (Bullitt County Deed Book

M:233). Charles may have operated the mill although no evidence was found to confirm this assumption. He apparently died in Nelson County since the Nelson County Circuit Court issued an order to settle his estate in 1863. His lands were divided and one of his sons, Asa Lutz, received a 17 1/2-acre tract that included the mill. On May 18, 1878, Asa and Rebecca Lutz transferred the same tract to William T. Lutz (Bullitt County Deed Book V:578). The mill was not specifically mentioned and may not have been in operation. The next transfer was not until December 18, 1893 when William and Mary Lutz (spelled Lutes in the deed), then living in Nelson County, sold the property to B.J. Blandford and J.W. Hardy of Bullitt County. No deed of transfer was found for these latest buyers and the chain of title was broken at this point.

The survey calls for the 100 acres that Wilford Lee purchased show that Crooked Creek formed part of the north boundary line of the tract (Figure 1). When platted, the course of Crooked Creek forms a large meander. The only area of Crooked Creek that today exhibits significant large scale meandering is northwest of Orms Knob near where the creek empties into the Rolling Fork. This area is part of Hays Flats and lies within the military reservation. While it is not possible to pinpoint the mill site, a general area can be suggested on the basis of the deed research (Appendix C).

Wilford Lee and Hoglund October 17, 1838 Bullitt County Order Book G:7

This reference may indicate a temporary partnership between these two men, relating either to the Troutman mill that Lee acquired from Nathan Harris or one that Hoglund had erected. The order entry concerned the erection of two gates at the outside fences of Wilford Lee's farm across a road that connected his mill on Cedar Creek to the Shepherdsville-Elizabethtown.

Jacob Yannowine May 17, 1830 Bullitt County Order Book F:2

This mill was located on the Cedar Creek tributary of Floyd's Fork and was not within the military reservation boundaries (Bullitt County Plat Cabinet A: Slide 37 and 38). It might have been near the present Camp Shantituck west of Mt. Washington.

Mills Reported on Cedar Creek (Hardin County)

Isaac Larue March, 1799 Hardin County Order Book A:184

Isaac Larue applied for a writ of condemnation of one acre of land opposite where he wanted to build his mill on Cedar Creek. The land to be condemned belonged to Henry Younger. Larue owned a huge tract of 6250 acres that lay on Cedar Creek and the Rolling Fork. He apparently acquired it prior to 1796 and began selling of parts of it from that date forward. A check of numerous deeds that conveyed these sales was undertaken but none mentioned a mill. Budgetary constraints prevented a comprehensive analysis of Larue's large landholdings. However, the possibility of his mill (if it was built) being on Fort Knox

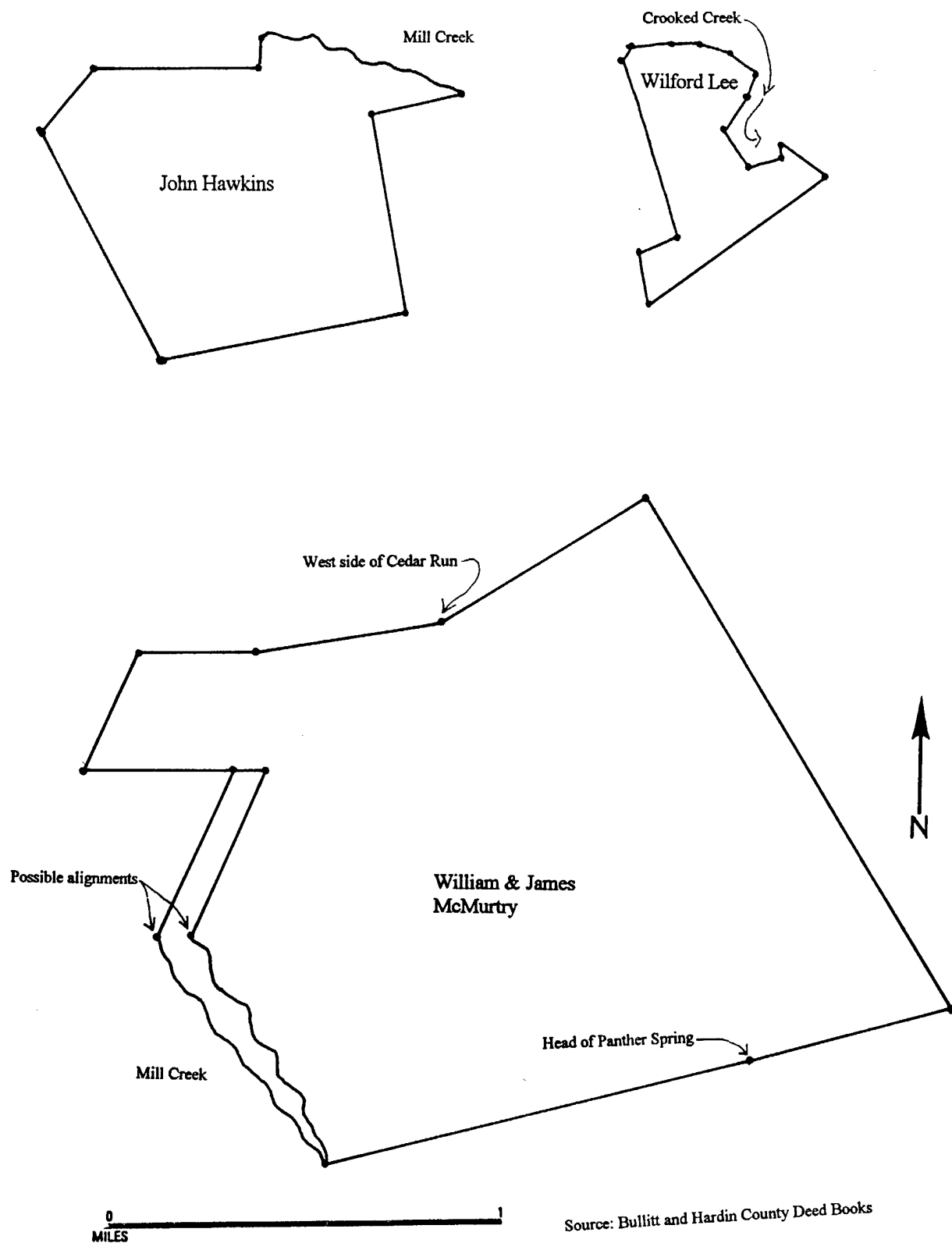


Figure 1. Plats of three mill tracts in Fort Knox.

appears good.

Joseph Riley May 5, 1828 Hardin County Order Book F:5

The order book reference mentioned a road to be established from Joseph Riley's Mill on Cedar Creek, running up Cedar Creek through the land of Riley, David C. Swan and Samuel Duty, and intersecting the road from Elizabethtown to Middleburgh Ferry. Riley's Mill was apparently in operation at this date. Joseph Riley acquired three tracts in 1823 and 1828. The 1823 conveyance transferred 325 acres belonging to Thomas P. Riley to Joseph and John Riley (Hardin County Deed Book J:46). The 1828 conveyances were from David Swan in March and Frances Riley in June (Hardin County Deed Book K:425). Only one of the three tracts could be platted completely and none of them seemed to share any boundary lines. The Swan tract was conveyed in 1836 to Elizabeth Matilda Riley but no mill was mentioned. A check of other deeds conveyed by Joseph Riley failed to locate a tract with a mill on it. As a result, the location of the mill and its possible inclusion within Fort Knox was not determined.

Mills Reported on Crooked Creek (Bullitt County)

Wilford Lee December 4, 1826 Bullitt County Order Book E:79
January 1, 1827 E:83
February 5, 1827 E:87, 92

Lee requested to build a mill on Crooked Creek and one writ was issued in January of 1827 but never executed, apparently because Lee bought the mill built by Michael Troutman from Nathan Harris; however, Lee requested another writ to build one or two water grist and saw mills on land he owned on Crooked Creek about one-half mile below the land of John Purcell and near Gordon Grundy's land. The writ was approved. No deed information was found relating to this mill which may never have been built.

Shepherd 1797 Bullitt County Order Book A:20

This mill was probably near Shepherdsville where the Shepherd family was prominent. Deed research did not uncover a Shepherd deed that mentioned a mill.

Mills Reported on Mill Creek (Hardin County)

Berry April 12, 1847 Hardin County Order Book L:158

A search for deeds to the Berry family, which included men named George, Enoch, Josiah, Morris and James, failed to identify a deed that referred to Mill Creek.

John Colvin February 18, 1839 Hardin County Order Book I:77
October 9, 1849 M:141

March 31, 1859 O:348
December 19, 1859 O:413

Several deeds to John Colvin or Calvin for land on Mill Creek were located and checked. While some made reference to a mill, only one indicated a transfer of land with a mill on it. On December 28, 1831, William and Susan Hawkins transferred 5 1/2 acres to John Calvin/Colvin that contained a saw mill, "an old grist mill seate [sic] and the house that is on it and the hopper but nothing else that belongs to the grist mill" (Hardin County Deed Book M:341). The deed went on to indicate that Hawkins was to move his belongings "out of the way when ever said Colvin gets ready to commence rebuilding of the Mill it lying and being in the county of Hardin on Mill Creek about one mile below Hynes lick formerly belonging to John Hawkins". The tract was on the south side of Mill Creek. Survey calls were not specific enough to plat the tract.

The deed from John Hawkins to William Hawkins was also located. This deed indicated that John Hawkins was William's father. William promised to "find and provide a suitable maintenance house, room, food and clothing for the said John during his natural life" in return for a 400-acre tract that John Hawkins had purchased from John Creamer and recorded in the Nelson County clerk's office (Hardin County Deed Book M:122). William also received all the household and kitchen furniture and personal property that John owned.

While it was not possible to specifically locate this site, it probably is within the military reservation boundaries. The Calvin/Colvin family are buried in several cemeteries on post, two of which are named after them. One of the Colvin cemeteries is on the eastern edge of the cantonment area near the sewage disposal plant (Appendix C). Although this cemetery is named after the Colvin family, none of the gravestones have Colvin (or Calvin) as a surname. The other cemetery is on a ridge south of Mill Creek and contains Colvin graves. Mill Creek flows roughly east-west in several places near these cemeteries. The association of John Creamer with the mill tract also is suggestive of a location near Creamers Spring Branch, and, in fact, this site may also have been the site of Creamer's Mill. A deed dated 1801 was located in Nelson County that described the 400-acre tract sold to John Hawkins by John Creamer. The grantor's name was spelled "Cramer" in this deed which also indicated that both parties lived in Nelson County at the time of transfer. The deed description included metes and bounds but unfortunately did not indicate the specific course of Mill Creek so a plat could only be estimated. The tract was part of a 4000-acre survey patented to William May as an assignee of Stephen May. It shared boundaries with Spangler and included a spring, but did not mention a mill. The drawn plat (Figure 1) indicates that Mill Creek formed the northernmost boundary of the tract and must have run generally North 73 degrees East. The Fort Knox contract archaeological staff surveyed Mill Creek where it runs between the two Colvin cemeteries and located a mill site that probably is the Colvin mill. This location is shown in Appendix C.

Colvin sold his mill property on March 12, 1856 to J.W. Overton (Hardin County Deed Book 2:427). He combined other property with the 5 1/2-acre tract that he bought

from William Hawkins to form a 150-acre parcel. The tract is described by reference to neighbors rather than specific metes and bounds. Neighbors included Garnett (probably James), Johnson, Jesse Wooldridge (formerly Inlow) and Jenkins. Cedar Branch and Mill Creek are mentioned; however, Cedar Branch does not appear to be the same as Cedar Creek. Rather, it is a tributary of Mill Creek. Overton is mentioned as a mill owner in the 1870 and 1880 federal manufacturing censuses and probably was operating this mill during those decades. His disposal of the property was not determined. The land was owned by L.W. Calvin at the time of Army acquisition.

John Cowley (McClure 1979)

The Cowley family bought land at the mouth of Cedar Creek and on Dorrets Run of Mill Creek; Colonel John Cowley built a small mill and distillery on his 1000-acre tract, near Falling Springs (McClure 1979). Falling Springs is located within Fort Knox (Appendix C). Hardin County deed records indicate that John Cowley (also spelled Cooley) purchased 400 acres in two transactions from Henry Bright in 1829 and 1834 (Hardin County Deed Book L:155; P:91). The 400-acre tract was a survey first made for George Pope who sold Bright the property. Only the "lower end" of the 400 acres was described in one of the deeds. The tract was on Mill Creek but the survey calls do not mention any water course. Cowley continued to acquire land in the Mill Creek area until he amassed considerable holdings, including a town lot in McMurtryton. Deeds were checked into the 1850's without finding any mention of a mill.

<u>John Creamer</u>	July, 1800	Hardin County Order Book A:233
	October, 1800	A:257

In July of 1800, a writ was issued to the Sheriff of Hardin County to assemble a committee to view the proposed mill site. The following October, an acre of property on John Creamer's property was surveyed for the mill. The July reference indicates that the land was on a west branch of Mill Creek and included a large spring. It was very likely the same site that John Hawkins purchased, transferred to his son, William, and eventually was owned by John Colvin and later, J.W. Overton (see discussion for Colvin's Mill). It is also possible, even probable, that Creamer [Cramer] never built the mill but moved to Nelson County instead where he sold the land to Hawkins in 1801.

<u>Charles I. Dorsey</u>	July 2, 1825	Hardin County Order Book E:15
		H:233

The 1825 order book entry refers to a road running from the mouth of Mill Creek, past Dorsey's Mill and intersecting with Dowdell's Road. The reference in Book H called the mill "old". Deed research indicates that the mill site is probably on Fort Knox. No deed was found that indicated how Charles Dorsey acquired the land on which he built a mill. However, a deed for 160 acres from Dorsey to Nathan Young filed on December 15, 1830, contained a grist mill and a saw mill situated on Mill Creek known by the name of Charles

Dorsey's mills (Hardin County Deed Book M:215). No survey calls were included for the conveyed land but the deed did mention that the mill tract adjoined two properties belonging to John Jones and James Hern. They had purchased the tracts from Dorsey. No deed to John Jones was located, but the transaction with James Hern was found. This deed conveyed 61 1/2 acres on July 16, 1829 (Hardin County Deed Book L:243). When platted, however, there are insufficient landmarks to place it on a topographic map.

Nathan Young sold the 160-acre mill tract and another tract of 32 3/4 acres to Thomas G. Livers on September 19, 1836. The terminology of the deed suggests that he also conveyed a saw mill that was not on either of these parcels. The deed reads "and assigning a certain tract or parcel of land his sawmill on Mill Creek . . . also 160 acres of adjoining John Jones and James Hern being the same land deeded by Charles S. Dorsey and wife to Nathan Young . . . and also another tract conveyed by deed from Benjamin Vanmeter and wife to said Young containing 32 3/4 acres" (Hardin County Deed Book Q:47). The combined 162 3/4 acres were transferred by Commissioner W. H. Hays on behalf of Thomas Livers to John W. Hall on June 22, 1843, following the settlement of a chancery suit filed by John Lloyd against Livers.

The Vanmeter deed was located; its survey calls indicate that the land bordered on Mill Creek in part and included the junction of Mill Creek and Burcham Spring Branch. Unfortunately, the plat of the tract could not be reliably placed on a topographic map. The Burcham cemetery is located on the Fort Knox quadrangle map at the headwaters of an unnamed branch that flows into Mill Creek on the south side of Hooker Mountain (Appendix C). If this is Burcham Spring Branch, then the Dorsey property might have been along Mill Creek as it flows around Hooker Mountain.

Gill July 17, 1837 Hardin County Order Book H:250

The order book reference reported that a road was to be viewed from Gill's Mill on Mill Creek, with the intent to intersect the road from Elizabethtown to the mouth of Salt River. Only one deed conveyed land prior to 1837 to an individual named Gill. William Gill purchased a 200-acre tract from Richard J. Munford in 1805 (Hardin County Deed Book C:59). Unfortunately, none of the survey calls can be relocated on the modern landscape without extensive additional deed research. William Gill conveyed two tracts in 1808 to John Brooks and Thomas Logsdon, Jr., at which point he was living in Barren County (Hardin County Deed Book D:48, 126). Neither of these tracts mentioned watercourses. Since William Gill seems to have moved out of Hardin County by 1808, he probably was not the mill owner. Two conveyances by the heirs of Samuel Gill were transferred in 1837 to William Owsley and Ambrose Thompson. Owsley's tract did not mention water courses and Thompson's tract was off the post on Billy's Creek. No other deeds were found for the Gills and the mill site could not be located.

David Gilmore March 24, 1806 Hardin County Order Book C:78

This reference stated that Gilmore owned land on both sides of Creamer's Spring Branch (a west branch of Mill Creek) where he wanted to build a mill. A jury was ordered to view the land and condemn one acre. No subsequent entry in the order books was found to indicate if he actually built the mill. Mill Creek only has a few significant western branches. These include, from the mouth of Mill Creek to the south, 1) Johnson Branch and Tollgate Creek, 2) a short unnamed branch that flows south of Main Range Road, 3) a larger unnamed branch that begins within the cantonment area and runs south of a quarry and the sewage disposal plant, 4) the branch that flows out of Sanders Spring, and 5) the branch that flows out of Falling Springs. One of John Cowley's deeds conveyed to him in 1836 shared a corner with David Gilmore. However, this survey could not be platted because of incorrect survey calls that do not join. The description also fails to indicate landmarks that can be located on the modern landscape. Survey by the Fort Knox contract archaeological staff located a mill site on an unnamed drainage south of Canby Hill that may be the Gilmore mill (Appendix C).

James & William McMurtry

April 17, 1837

Hardin County Order Book
H:239

William and James McMurtry purchased 1025 acres on Mill Creek near Panther Spring from Samuel Haycraft prior to 1839 on which this mill may have been located. William McMurtry purchased two tracts from Jacob Swank in 1839 on which he established a small town called McMurtryton. This community was the predecessor of Radcliff (Urbahns 1988). Financial difficulties caused the 1025-acre tract to be conveyed to Daniel Haycraft in 1842 in a foreclosure suit. Their mill was probably somewhere on this large tract. The survey calls are difficult to plat for this tract; however, the description mentions a beginning corner at the head of Panther Spring, a north boundary corner on the west side of Cedar Run, adherence to the course of Mill Creek on part of the west side of the tract, and an island in Mill Creek (Figure 1). If these landmarks could be located, the tract could probably be placed in the general area. Based on the way Mill Creek had to have run in this deed, a promising area is on the east side of the creek in the area traversed by Poorman Range Road and Main Range Road. If the tract was located here, Panther Spring may have been at the head of the branch near the Gentry Cemetery.

Snyder

(Freeman 1988)

Snyder's Mill is mentioned in a short article in Ancestral News in connection with Rogersville which was a rather amorphous community in the area of Mill Creek, now within the post boundaries. While discussing the establishment of Mill Creek Road, Mrs. Freeman states that "the road was said to have run to Snyders Mill on Mill Creek" (Freeman 1988:85). However, all of the documented evidence located for Snyder indicate that he was associated with the Star Mills on the Nolin River (Hardin County Deed Book 9: 59). No deed evidence was found to indicate that he had a mill on Mill Creek.

John O. Stovall August 19, 1850 Hardin County Order Book M:230

This site is 15Hd253 discussed previously. The order book entry refers to a road that was to be viewed from the mill to the Blue Ball Meeting House.

Mills Reported on Otter Creek

George Adams October 3, 1843 Meade County Order Book D:54

This entry referred to a road from the mill to Brandenburg.

Green Adams April 15, 1833 Hardin County Order Book G:166
December 16, 1833 G:230

According to the county order book, Green Adams owned 100 acres on the west side of Otter Creek where he wished to erect a grist and saw mill. A check of Hardin County deed books did not result in any deeds for Green Adams. Since his mill was on Otter Creek in Hardin County in 1833, it must have been outside the post boundary in the upper reaches of the drainage.

<u>William B. Adams</u>	September 4, 1843	Meade County Order Book D:41
<u>Adams</u>	September 1, 1845	Meade County Order Book D:168
<u>Evan Pusey</u>	March 5, 1860	Meade County Order Book G:78
	April 2, 1860	G:86
<u>Pusey & Adams</u>	1850 federal census	
<u>Collins Fitch</u>	March 2, 1840	Meade County Order Book C:309
	September 4, 1843	Meade County Order Book
		D:41
	1850, 1860 and 1880 federal census	
<u>Adams & Fitch</u>	September 6, 1846	Meade County Order Book D:280

Most of these order book entries refer to the same mill which had a number of owners. William B. Adams and Daniel Kable apparently were the original builders of the mill. Evan Pusey later bought an interest in the mill. Evan Pusey had interests in a number of mills, including a major enterprise on Doe Run. The 1860 references refer to a road from Brandenburg to his mill on Otter Creek. A reference on page 119 of the same order book indicated that Pusey lived on the farm of Dr. H.C. Crist at the mouth of Otter Creek.

On September 30, 1839, Evan Pusey purchased from Daniel Kable a one-half undivided interest in land that contained a saw mill built by Kable and Adams (Meade County Deed Book C:378). This purchase of interest made Pusey a partner to Adams. However, Kable apparently owed Adams money and a chancery suit was filed by Adams against the Kable Heirs around 1840; Collins Fitch acted as Adams' security in his appeal of the case. For that service, Fitch was conveyed all right and title to approximately 280

acres on which stood Adams' Mill (Meade County Deed Book E:93). On January 1, 1841, William B. Adams was awarded property from the estate of Daniel Kable for notes that had not been paid (Meade County Deed Book D:74). This included a one-half undivided interest in 281 1/2 acres on Otter Creek, containing a saw mill. He continued to have financial troubles, however, as he contracted several mortgages (Meade County Deed Book E:101,302; F:554; G:369). One was to William Fairleigh and Thomas H. Mills who served as security for him in an injunction bond. This mortgage concerned a suit brought by Adams against Henry B. Truman and Collins Fitch. His collateral was a "lot" of saw logs "now lying below Fitches Saw Mill on Otter Creek at the lower end of said Fitches little field and on his land being forty five in number Poplar, Walnut etc. also the Sawed plank and other timbers now lying at said Adams Saw Mill on Otter Creek" (Meade County Deed Book E:302).

In 1850, he entered into another mortgage agreement with James D. Percefull and James Stuart in exchange for their having endorsed a promissory note for \$200.00 to St. Clair Young. Adams owed a small amount of court fees to Stuart and payment for legal services to Percefull. His collateral was his mill and mill tract which he and Evan Pusey had purchased at the commissioner's sale that settled Adams' suit with Kable. In 1853, Adams mortgaged his interest in the mill tract to Pusey (Meade County Deed Book G:369). Pusey is listed alone in the other references dating to 1860, suggesting that he bought Adams' interest in the mill sometime between 1850 and 1860.

Fitch is listed separately from Pusey and Adams in the 1850 federal manufacturing census, indicating that his mill at that date was distinct from that of the other two men. Its location has not been determined. Fitch owned a large tract on Otter Creek that he bought from William Castleman in 1836 (Meade County Deed C:171). When platted, it is a rectangular parcel with Otter Creek entering the property a little west of the center of the southerly line and exiting at the northwest corner. The deed indicates a "high cliff of rocks", and shared corners with Charles McCormick and a 206-acre tract.

Crabb (Webb and Brockington 1986)

This mill was reported to have been established as early as 1804, near Garnettsville (Webb and Brockington 1986:9). However, the authors do not indicate where they found the information on this mill. A check of the Hardin County deed index revealed no deed for anyone named Crabb.

Thomas Davenport November 19, 1866 Hardin County Order Book R:182

Thomas Davenport's Mill was located on the Hardin County part of Otter Creek which is not part of Fort Knox.

Collins Fitch See William B. Adams.

William T. Fitch 1870 federal census

Tandy Fitch (Wheaton 1987)

This mill was reported by an informant named Mr. Watts who was interviewed by Garrow & Associates, Inc., in conjunction with their testing of several sites in the Garnettsville area. Wheaton (1987:29) identified a building marked Fitch on a 1908 Army maneuver map and on an 1851 map of Kentucky (Lee 1851) that he thought might be the site. It was "over half way to the Ohio River downstream from Garnettsville" (Wheaton 1987:29). This location is the same site as 15Md130 documented by the 1979 survey (O'Malley et al. 1980).

Christopher Grable September 23, 1806 Hardin County Order Book B:112
Garnett March 22, 1824 Meade County Order Book A:7
James A. Withers 1870 federal census

Grable, Garnett and Withers were sequential owners of the mill site of 15Md185 in Garnettsville; Daniel Young also owned and operated the mill. This site has been previously researched by Holmberg (1991), Wheaton (1987) and Webb and Brockington (1986). Results of test excavations at this mill are presented in a later section of this report.

Grahampton/Grahamton December 11, 1837 Meade County Order Book C:199
July 2, 1838 C:230
January 7, 1839 C:254
W.G. & O.M. Anderson (Grahamton) 1860, 1870 and 1880 federal censuses

This large mill complex at Grahamton is Site 15Md378. It was previously researched by Holmberg (1991) and is also the subject of a publication issued by the Ancestral Trails Historical Society (Burnett and Urbahns 1992).

William Haywood April 15, 1839 Hardin County Order Book I:96
June 16, 1856 O:46
November 19, 1866 R:182

William Haywood's Mill was located on the Hardin County part of Otter Creek which is not part of Fort Knox.

Abner Lane March 4, 1839 Meade County Order Book C:260
December 3, 1849 E:16
March 4, 1850 E:33
February 3, 1851 E:108
June 19, 1847 Hardin County Order Book L:183
Burch & Lane 1880 federal census

The first entry referred to a road that was to be viewed for altering; it ran from Abner Lane's Mill on Otter Creek to John Crutcher's land. The next three entries also

referred to a road that was to be viewed from Bloomington to Lane's Mill, beginning at the county line near the John Graham farm. No Meade County deeds were found for Abner Lane. Deeds were located for William Lane and one of them was a mortgage for his property on Otter Creek where he was building a mill in 1826 (Meade County Deed Book A:187). This mortgage to John L. Pruitt used as collateral a 200-acre tract. The tract was not described but later deeds indicate that Lane had property at the mouth of Otter Creek and on the Ohio River where he operated a ferry. He sold a tract of 77 1/4 acres in 1837 to Samuel Overton that cornered on William Garnett and Grable's ponds (Meade County Deed Book C:251). This property was apparently in Grahamton (Pamela Schenian personal communication, 1996). In 1844, he sold 160 acres on the Ohio River to Peter King and Collins Fitch (Meade County Deed Book J:93). Sixty acres of the tract had been lost in a law suit leaving the balance of 100 acres to be conveyed. William and Abner Lane's relationship was not determined. Abner may have been a son who took over the mill's operation but never owned it.

The association of Burch and Lane probably indicates a partnership, as was commonly the case in the later decades of the nineteenth century for mill operations.

John Lawson October 25, 1824 Meade County Order Book A:65
December 27, 1824 A:80

John Lawson was issued a writ of condemnation for his proposed mill site on Otter Creek. He owned land on both sides of the creek. The next entry ordered a report on the mill to be filed and mentioned that a dam of three feet in height was to be built. The Hardin County deed index was searched for Lawson deeds since he probably bought the mill property prior to the establishment of Meade County; however, no deeds were located for Lawson. A later deed was located for Lawson in which he purchased a 33-acre tract from Thornton A. Mills that was part of Philip Barbour's survey tract and on an old road (Meade County Deed Book C:270). Barbour's survey included 2,708 acres in the Garnettsville area (Holmberg 1991). Lawson mortgaged the T.A. Mills property, four 1-acre lots in Garnettsville, two slaves, household furniture, livestock and the accoutrements of his saddle shop to W. & C. Fellows and Co. of Louisville (Meade County Deed Book E:51). One of the lots contained his "old store house", another his tanyard and a third an enclosed meadow. In 1850, Lawson was living in the household of his son-in-law, John D. Coleman, who was listed as a miller, and may have taken over the operation of the Lawson mill. If the Lawson mill was between Grahamton and Garnettsville, it is likely to be on the military reservation.

Sipes November 9, 1818 Hardin County Order Book C-1:532
February 8, 1819 C-1:548
October 2, 1826 E:131
May 7, 1827 E:187
April 6, 1829 F:72
May 3, 1830 F:172

The references were all to roads that ran to Sipes' Mill. The 1818 reference is to a road that ran from Elizabethtown to the mill while the 1819 reference mentioned a road between the Mill and Gordon's Boat Yard on the Rolling Fork. Another or the same road from Elizabethtown is mentioned in the 1826 reference. A new road was viewed in 1827 that ran from the mill to intersect with the road leading to John Walker's Furnace. The 1829 reference concerned a public road that ran to the Green County line from the mill. This reference suggests that John Walker's Furnace is upstream from Lipes' Mill. Since Meade County was created in 1823, the continued mention of Sipes' Mill in Hardin County order books strongly suggests that the site was on the Hardin County portion of Otter Creek. This location is not within the Fort Knox boundaries.

McCracken January 7, 1839 Meade County Order Book C:254

The order book referred to a road from Grahamton to McCracken's Mill that was to be viewed, indicating that the mill had already been built by 1839. The mill owner was probably Ovid McCracken. McCracken's Springs is located just south of Grahamton. Ovid McCracken purchased 85 acres on Otter Creek from Philip Barbour in 1819 (Hardin County Deed Book G:357). The property cornered on Shacklett's Road and Grable's field. He acquired other property, including 1,344 acres from P.H. Darby in 1829 and 40 acres from Joseph Woolfolk in 1831 (Meade County Deed Book B:132,215). The Darby conveyance did not mention a water course and could not be precisely placed on a map. The Woolfolk tract cornered on the mill tract of Overton and Fishback who ran the mill identified as Site 15Md248. His mill may have been on one of these properties. His heirs still owned the land encompassing McCracken Springs when the federal government formed Camp Knox. A milldam is still visible downstream of McCracken Springs and is likely to be associated with McCracken's Mill (Appendix C).

<u>Overton</u>	July 14, 1817	Hardin County Order Book C-1:383
	October 11, 1819	Hardin County Order Book D:9, 43
	April 26, 1824	Meade County Order Book A:20

Samuel P. Sterrett February 5, 1844 Meade County Order Book D:73
1870 and 1880 federal censuses

Overton and Sterrett were sequential owners of the mill site designated 15Md248, now in Otter Creek Park. Holmberg (1991) discussed the chain of title for this site but misidentified Site 15Md164 as the mill site.

B.M. Tracy & Son (R.L. Polk and Co. 1896)

This mill was reported in a state gazetteer and business directory for 1896 and cited in Wheaton (1987). Wheaton suggested that the site corresponded to a building marked Tracy on a 1908 Army maneuver map. This location is about one-half mile downstream from Garnettsville (Appendix C). It does not appear to be on Fort Knox property, but the

topographic map shows two buildings (probably a house and a barn) standing on the site.

Daniel H. Vertrees and James Nall

November 19, 1866 Hardin County Order Book
R:182

This entry concerns an application for a mill about three miles below Thomas Davenport's Mill and about one mile above Haywood's Mill. Vertrees and Nall owned land on both sides of the creek. This mill was probably upstream of the Fort Knox portion of Otter Creek.

Mills Reported on Poplar Springs Branch

Ezekial Field Paul Urbahns, personal communication 1996

Ezekial Field's mill is described as a seasonal mill that was located near the L&N Turnpike at Poplar Springs. Poplar Springs is indicated on the Fort Knox quadrangle and is within the military reservation (Appendix C). No deed information was found that pertained to this mill. Cora B. Thomas owned the property at the time of Army acquisition. She inherited the land from her uncle, John Cora Field (Hardin County Will Book F:255). Ezekial Field died in 1858 at the age of 85 years.

Unnamed Saw Mill at or near Pleasant View

A saw mill site is shown at Pleasant View on a map dated 1975 and prepared by Robert M. Bleakley. The map illustrates some of the area that later became Fort Knox and focuses on the area from West Point to Stithton. It was produced to commemorate the birthplace and childhood home of William E. Bleakley and the previous three generations of his ancestors. The mill at Pleasant View was near or on a tributary of Tioga Creek that flows by Dripping and Poplar Springs (Appendix C).

The chain of title was attempted by identifying a possible owner of the property at the time of the federal acquisition and working back. However, no mention of a saw mill was found in any of the deeds, and the chains of title were not completed beyond the reported 1903 date.

The Pleasant View mill site appeared to be located on land the federal government purchased in 1919 from J. D. Robinson (Hardin County Deed Book 72:512). This tract of 51 acres was bordered by the L&N Turnpike (then known as Dixie Highway) on the west. The deed excepted a one-acre parcel known as the stillhouse lot on the east side of the Dixie Highway that Robinson had bought in 1889, and a 5-acre tract on the old Keys Ferry Road that he had purchased in 1888. The remaining acreage and the stillhouse tract traced back to William H. Groom of Jefferson County (Hardin County Deed Book 34:585) who sold to Robinson in 1889. A description of the 51 acres was given; the deed further specified that the Baptist Church lot and the "burying ground for the color people" were not conveyed, and

gave a previous transaction reference. This reference indicated that Caroline Fuller of Arkansas sold the 51 acres to Groom in 1878 (Hardin County Deed Book 22:303). Excepted from this deed was the Baptist Church and burying ground. No mention of a mill was made.

The stillhouse tract was also mentioned separately with a different previous sale reference. A. E. Hedges (or Hodges) of Cole County, Illinois, sold the stillhouse tract in 1885 via her brother, W.R. Montague, acting as power of attorney, to William H. Groom and William Chickering of Hardin County. The old stillhouse was still standing at the time of this transfer. However, no mention of a saw mill was made. Robinson may have erected a small saw mill here during his ownership. Kempf (1996:254) presents information about Pleasant View which was also known as Wigginton. J.D. Robinson was a storeowner who operated a general store in the community. The Pleasant View Church was located on the crest of a hill just east of the L&N Turnpike.

Mills Reported on Rolling Fork (Hardin and Bullitt Counties)

J.V. Froman (O'Malley 1996a)

This saw mill was located on the Rolling Fork at Pitts Point. It is referenced in O'Malley (1996a).

Hardy & Bowers 1880 Federal manufacturing census

This mill was a steam powered saw mill in Bullitt County.

R.M. Harshfield & Co. 1870 Federal manufacturing census

This steam powered flour mill was in Pitts Point on lots 4 and 5; it was probably built by John W. Miller who sold it to the Harshfields; it was operated by J.V. Froman for awhile. A chain of title is included in O'Malley (1996a).

Atkinson Hill March 11, 1797 Hardin County Order Book A:113

This mill was described as being opposite Shackles Fall on the south side of the river. Atkinson Hill served as a judge in Nelson county (McClure 1979:66-67). This mill probably was outside the post boundary.

Joseph Kirkpatrick April 13, 1818 Hardin County Order Book C-1:435

McClure (1979:171) indicates that a Gabriel Kirkpatrick had a mill at or near the "Sinking Spring" near the Thomas Lincoln farm. This location is near Hodgenville. Cary M. Mather, who was a relative by marriage, later was associated with this mill. It is not on the post.

John Miller November 16, 1840 Hardin County Order Book I:238

John Miller's steam mill was described as being located at the Burnt Lick Ford on the Rolling Fork, presumably on the Hardin County side. A road was to be viewed to the mill from Savage's Mill on the Nolin River. Numerous deeds were found for John Miller who also had a son by the same name. Only three acquisitions were found that were on the Rolling Fork. None of these were sufficiently detailed to locate the tracts on a modern map. However, Miller's other property mostly lay on water courses nearer to Elizabethtown or in the southern part of the county.

Dennis Purcell May 20, 1833 Hardin County Order Book G:178
July 15, 1833 G:185

The first order book entry concerns a request for a road to run from Dennis Purcell's Mill on Rolling Fork to another mill on Clear Creek in the eastern part of the county. The second entry indicates that Purcell also ran a ferry at his mill. No deeds for Dennis Purcell (also spelled Parcels) were found, although a Daniel Purcell had several listings. Deeds for other Purcells were for water courses like Valley Creek, Meeting Creek, Sinderson Creek and Rough River which all flow in other areas of the county away from Fort Knox. Although Purcell cannot be unequivocally ruled out, it appears unlikely that his mill was in the boundaries of Fort Knox.

Mills Reported on Salt River (Hardin and Bullitt Counties)

John E. Fisher June 21, 1841 Bullitt County Order Book G:169

According to a deed from John H. and William S. Barclay filed April 29, 1839, John E. Fisher bought a land tract with a saw mill located on Salt River and Dutchman Creek. The previous sellers had been Charles Hall and Henry Crist (Bullitt County Deed Book I:178). Dutchman Creek empties into the Salt River at the Bullitt/Spencer county line, indicating that this mill was not within the military reservation.

Keane and Clauson 1880 federal manufacturing census for Hardin county

This mill was a water powered saw mill in Atcher's Precinct which was probably located in the present boundaries of Fort Knox. However, no deed information was found for this mill.

Hugh Lee Toole and Powell (1985)

During a historic resource assessment of the Vine Grove and Radcliff Connector to I-65 in Hardin County, Robert Toole and Helen Powell reported a possible mill site associated with Hugh Lee. A search for the site was not successful. However, an inventory form with seven photographs of the mill site was prepared by Catherine C. Harned of the

Hardin County Planning and Development Commission in 1983. The location of the site is just outside the post boundaries (Appendix C).

Lowell & Brasher/Brasker 1880 federal manufacturing census

This mill was a steam powered saw mill in Bullitt County. The names may be incorrect in the census. Lowell could be Laswell, Laurell or Lovell while Brasher/Brasker probably should be Brashear. No locational information was found for this mill which would not have needed to be on a water course.

Miller Bullitt County Order Book G: 498

This mill was near Fisher's Mill on Salt River, according to this entry; it may have been Samuel Miller's mill which was reported in the 1880 Federal manufacturing census as steam powered. It was probably near the Bullitt/Spencer county line and not on post.

Hezekiah Stovall April 12, 1819 Hardin County Order Book C-1:571

This site is probably 15Hd253 on Mill Creek, previously discussed.

B.R. Young January 19, 1852 Hardin County Order Book N:72

Pusey February 16, 1857 Hardin County Order Book O:121

Young and Pusey were sequential owners of a steam powered mill on the Salt River, the location of which was reported by Richard Briggs. The site consists of a stone foundation on the south bank of the Salt River about one-and-one-quarter miles from its mouth. The chain of title is as follows:

The site is located on land that was purchased by the United States of America from Iola B. and John M. Payne, according to the real estate maps drafted by the Army at the time of acquisition (Appendix C). However, it was difficult to identify the exact deed corresponding to the land since no mill was mentioned at this late date. Nevertheless, the chain was traced back from John Payne successfully.

Grantor: Henry Duik

Grantee: J. H. Payne

Date: December 12, 1908

Reference: Hardin County Deed Book 55, page 626

Price: \$275.00

Size of Tract: 10 acres

Description: Beginning at a large sycamore and elm, beginning corner of William Withers' 1000 acre survey, thence with the line, South 18 degrees East 50 poles to a stake in a ravine between a beech and a hickory, S 86 degrees W 83 [or 33] poles to a stake under a bank near a bending beech, North 18 degrees West 50 poles to a stake on the bank of Salt River,

thence upriver North 6 [or 86] degrees West 33 poles to the place of beginning.

Grantor: John H. Jewell Heirs

Grantee: Henry Duik

Date: April 20, 1874

Reference: Hardin County Deed Book 16, page 199

Price: not specified

Size of Tract: 2 tracts of 68 and approximately 10 acres. The 10-acre tract was the mill tract.

Description: Tract 2 is the same land conveyed by John R. Pusey to Duik and Jewell recorded in Hardin County Clerk's office in Deed Book 11, page 506, lying on Salt River in Hardin county 1 1/4 miles above its mouth, containing 10 acres more or less, being same conveyed to Pusey by Scott, Brinkley and Co. in a deed of record in Hardin County Clerk's office with a steam sawmill thereon.

Grantor: John R. and Bettie Pusey

Grantee: Henry Duik and John H. Jewell

Date: August 26, 1867

Reference: Hardin County Deed Book 11, page 506

Price: \$4750.00

Size of Tract: approximately 10 acres

Description: The same description was included as in the above deed with the additional information that the tract included a steam saw mill, "three several cottages or dwellings and such other buildings as are situated or belong to the premises with Blacksmith tools, mill tools, the ropes, cables and ferry boat, three yoke of work oxen, one log wagon and chains".

Grantor: Scott's, Brinkley's and Turner's of New Albany, Indiana

Grantee: John R. Pusey

Date: 1857

Reference: Hardin County Deed Book 3, page 182

Price: \$2500.00

Size of Tract: 10 acres

Description: The tract was not specifically described but a mill house was mentioned.

Grantor: Alexander Anderson and wife of Floyd County, Indiana

Grantee: David Scott, John Brinkley and Isaac Turner of Floyd County, Indiana

Date: July 25, 1855

Reference: Hardin County Deed Book 2, page 173

Price: \$2500.00

Size of Tract: 10 acres

Description: The description used the same calls as the Duik to Payne deed with some discrepancies that appear to be transcription errors. A steam sawmill, a dwelling house and other building references that were illegible are also part of the deed.

Grantor: Bryan R. Young of Elizabethtown
Grantee: Alexander Anderson of Ohio
Date: March 16, 1855
Reference: Hardin County Deed Book 2, page 1
Price: land trade (9000 acres in Georgia)
Description: See above deed

Bryan Young's acquisition of the land was not determined. He owned lots in Elizabethtown and Leitchfield at various times as well as rural tracts on Valley Creek and the Rolling Fork. He also is listed as grantee in several deeds dating to the late 1830s and early 1840's in which he received slaves, household goods and buildings, that were mortgaged to him. Other documents reference him as a doctor. The mill is not listed in the 1850 manufacturing census under Young's name; however, he is mentioned in connection with a steam mill in an 1852 reference to a road proposed to run from Sally Davis on the old Salt River Road to the Young mill and on to West Point (Hardin County Order Book N: 72).

By the 1860 census, the mill was owned by John R. Pusey who is listed in the population returns as a miller with real estate worth \$2500.00 and a personal estate valued at \$400.00. The mill does not appear in the manufacturing census for 1860. Pusey sold the property to John H. Jewell in 1867 who apparently operated the mill with his partner, Henry Duik. Henry Duik is listed as a miller in the 1870 population census with real and personal estate values of \$900.00 and \$100.00, respectively. Duik and Jewell are listed in the manufacturing census for 1870 as proprietors of a saw mill powered by an 18 hp steam engine at a capital investment of \$4750.00. Four men were employed for seven months at \$1200.00 in wages to process 1000 logs (valued at \$3000.00) into 350,000 feet of lumber worth \$4400.00.

The mill's business status in 1880 is unclear. Henry Duik had, by that date, acquired sole interest in the mill property, but he is not listed as a miller in either the population or manufacturing census.

Mills Reported but No Water Course Indicated

S.B. Day September 20, 1875 Bullitt County Order Book K: 148

This mill was on a road that connected it to Horrell's Ferry on the Rolling Fork and to the Wooldridge Ferry Road and the Pitts Point/Shepherdsville Road. It must have been located on the post, but no deeds for S.B. Day were located in the Bullitt County files.

W.G. Hays May 18, 1874 Bullitt County Order Book K:49

This mill was on the road from Horrell's Ferry; it is probably the steam saw mill operated by Hays & Co. and reported in the 1870 Federal manufacturing census. A check

of the many deeds associated with W.G. Hays failed to recover any information about the location of this mill.

Stithton Roller Mill prior to 1918 (Winstead 1974)

The town of Stithton was acquired by the federal government in 1918. The Stithton Roller Mills were operated by C.H. Aubrey and his sons, Fred and Ed. The business was later moved to Louisville. The town became the site of the cantonment area of Fort Knox. It was probably steam powered rather than water powered since it was located on the karst plain at a considerable distance from a flowing water source. Its name indicates that it employed rollers to grind grain rather than millstones.

Unnamed Saw Mill in Hardin County

A saw mill site dated to 1903 was indicated on Bleakley's 1975 map of the West Point and northern Hardin County area, part of which became Camp Knox. The site was shown on the south side of the intersection of the Garnettsville-Muldraugh Road and an unnamed road that ran northerly to Tioga Station. Nearby farms included Dick Beeler to the east, Jenkins and Masden to the north and Taylor to the south. The site was on the land of N.J. Bishop, according to real estate maps for the Camp Knox acquisition. Bleakley took some of his information from a 1903 map surveyed by Col. O.H. Ernst of the U.S. Army Corps of Engineers; however, there are some discrepancies. This map showed the sawmill further south of the road intersection than on Bleakley's map. Two houses occupied by the Beeler family and one house occupied by a Taylor also were shown on the south side of the intersection. A house occupied by Jenkins is shown on the north side of the Garnettsville-Muldraugh Road. No Masden was indicated at the intersection.

SUMMARY OF DOCUMENTARY RESEARCH

The documentary research for additional mills on Fort Knox yielded abundant evidence of the milling industry in the three counties of Bullitt, Hardin and Meade. The Fort Knox area was a significant contributor to the milling industry in the tri-county area. An estimated 56 possible mills were identified in various public and other documents, maps, reports, etc. This estimate is tentative because some of the names that were encountered may refer to the same site, and further research may reduce this number. At least 21 of the identified mills are either known to have been located on the post or have a high probability of being on post. The state of their preservation remains a question; however, mill sites that have been actually located and examined for physical remains are in remarkably good condition, considering the many years since their abandonment and the impact of military activities. Their preservation may be improved by the restriction of military activity near water courses due to environmental and safety concerns. The following is a list of mills that are either known to be on the post or are very likely to be so located.

Mills in Bullitt County

Mill on Brown's Run
J.V. Froman's Saw Mill
R.M. Harshfield's Flour Mill
Michael Troutman/Nathan Harris/Wilford Lee's Mill

Mills in Hardin County

John Colvin/Calvin
John Cowley/Cooley
Charles Dorsey
Ezekial Field
Isaac Larue
James and William McMurtry
Stithton Roller Mill
Hezikiah/James B./John O. Stovall
B.R. Young/John R. Pusey
Saw Mill at Pleasant View (J.D. Robinson)
Saw Mill on N.J. Bishop property

Mills in Meade County

William B. Adams/Daniel Kable/Evan Pusey/Collins Fitch
William T./Tandy Fitch
Garnettsville (Grable/Garnett/Withers/Young)
Grahamton
Ovid McCracken
Isaac Overton/Samuel Sterrett

An additional 20 mills could not be precisely located based on the documentary information gathered for them. However, some of them may prove to be within the fort boundaries if additional research is carried out. These include the following:

George Adams
Berry
Crabb
S.B. Day
Gill
D. Gilmore
Hardy & Bowers
W.G. Hays
Keane & Clauson
Abner/William Lane

John Lawson
Wilford Lee
Lowell & Brasher/Brasker
Benjamin Summers
John Miller
John Nusz
Joseph Riley
Samuel Simmons
Thomas Smith
B.M. Tracy

Mills that were determined to be outside the fort boundaries include the following:

Green Adams
William Bush
T. Davenport
John E. Fisher
W. Haywood
Atkinson Hill
J. Kirkpatrick
Sipes
Samuel Miller
Dennis Purcell
Snyder
Shepherd
Vertrees & Nall
J. Yannowine

Despite the shortcomings of the deeds in the three counties that contain Fort Knox, additional research will undoubtedly clarify the locations and sequence of owners for many of these mills. The unindexed circuit court case files were not researched for this study due to budgetary constraints; however, several court cases were mentioned in the consulted documents and there are doubtless many more that shed light on the relationships and associations of the people who owned and/or operated mills.

TEST EXCAVATIONS AT THE GARNETTSVILLE MILL (15Md185)

The Garnettsville Mill site is located adjacent to a small tributary stream on the east side of Otter Creek. The tributary stream enters the Otter Creek mainstem at a right angle, and the mill foundation is on the south side of the stream. Physiographically, the mill site is located on a point bar of Otter Creek. The presence of the small tributary stream suggests the possibility of an alluvial fan formed by upland soil being carried and deposited by the stream debouching onto the Otter Creek floodplain. The soil stratigraphy documented at the site reflects the interplay of natural and cultural depositional episodes.

The Garnettsville mill appears today as a remnant stone foundation consisting of an enclosure with an open arch at one end and two corner foundations (Figure 2). The enclosure appears to have been the wheel house. This foundation is parallel to and immediately adjacent to a tributary stream of Otter Creek (Figure 3). An extension of the wall from the upstream end of the enclosure (where an arched opening still can be observed) forms a corridor for water to empty into the tributary stream (Figure 4). Impressions of logs or timbers are visible at the corner of this wall extension, and some log remnants were observed in the stream bed, suggesting that the stream was breached by a barrier such as a sluice gate that allowed the stream flow to be controlled. One of the corner foundation remains appear to be in its original location and it lines up well with the wheel house. The other corner is more indistinct but a small remnant of it lines up when a perpendicular line is run from the southerly wall line of the building. Using these clues, it can be suggested that the mill building (or the extant measurable part of it) was approximately 30 by 23 feet in dimensions, excluding the wheel house which was probably outside the main structure (Figure 5).

A photograph in the possession of Marguerite Lewis, a former Garnettsville resident, and published in Kempf (1996:217), shows an obscured view of the front of the mill. The photograph indicates that the building was multi-story. According to Kempf (1996:200), the mill was three stories in height. One small window is notable on the first floor as well as an additional opening on the second floor (either a window or possibly an opening for conveying grain or meal to and from the upper story). A porch is also visible on half of the building front. A shed addition can be seen on the side of the building, and part of a stone foundation is discernible.

The wheel house provides clues about how the millwheel operated and how big it was. The inside dimensions of the wheel house are 12.8 feet in length, 4.5 feet in minimum width, and 7.5 feet in maximum width. The width variation is due to the shape of the interior which is essentially a rectangle with a trapezoidal extension. The wheel probably was in the rectangular section and the trapezoidal section held the gears that transferred the wheel's power to the power train that turned the millstones or operated the saw. The dimensions of the wheel house suggest that the mill wheel was, at maximum, twelve feet in diameter since wheel houses were usually built to be a tight fit around the wheel. The wheel's breadth then can be calculated at no greater than 4.5 feet.

The positioning of the tail race is also informative. The only opening for water to exit the wheel house is through the southerly end where the arch and wall extensions are. This must have been where the spent water exited after being emptied out of the wheel buckets.

Given the direction of the current of both the tributary stream and Otter Creek, the most likely entry point of water directed to the wheel is from a southerly direction. While no dams were identified that might have harnessed water for this mill, it seems reasonable to assume that the much more abundant water of Otter Creek would have been tapped and



Figure 2. The Garnettsville Mill, showing stone foundations.

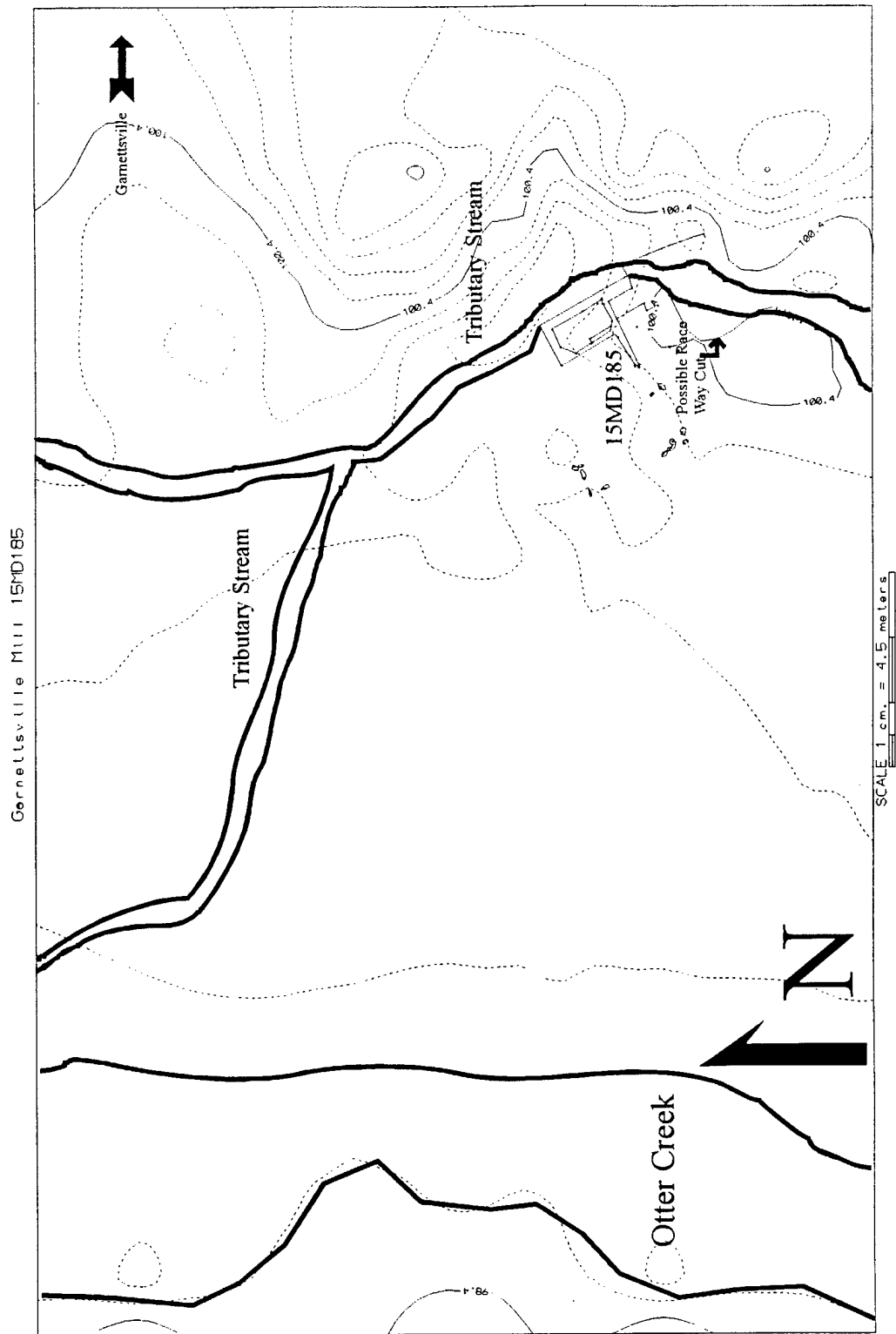


Figure 3. The Garnettsville Mill site relative to Otter Creek.

Contour Interval = 0.4 m

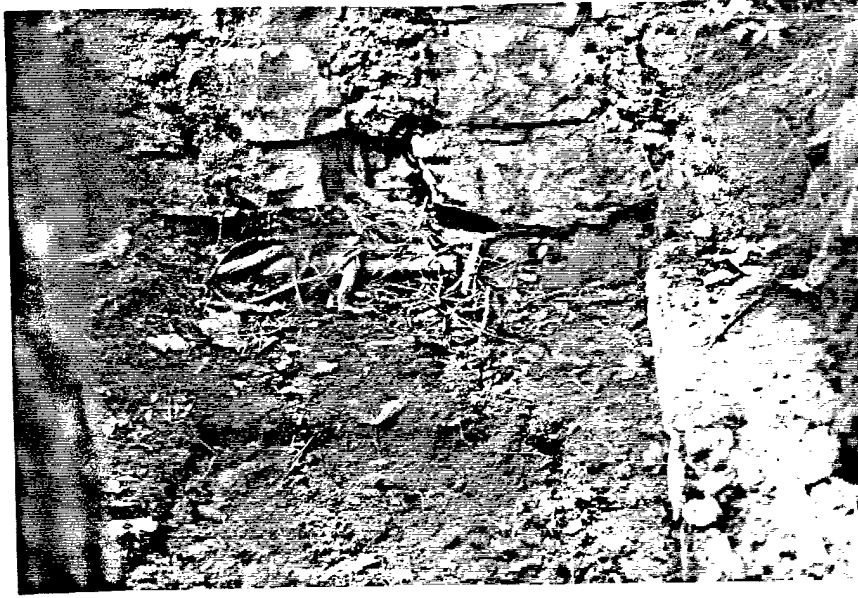
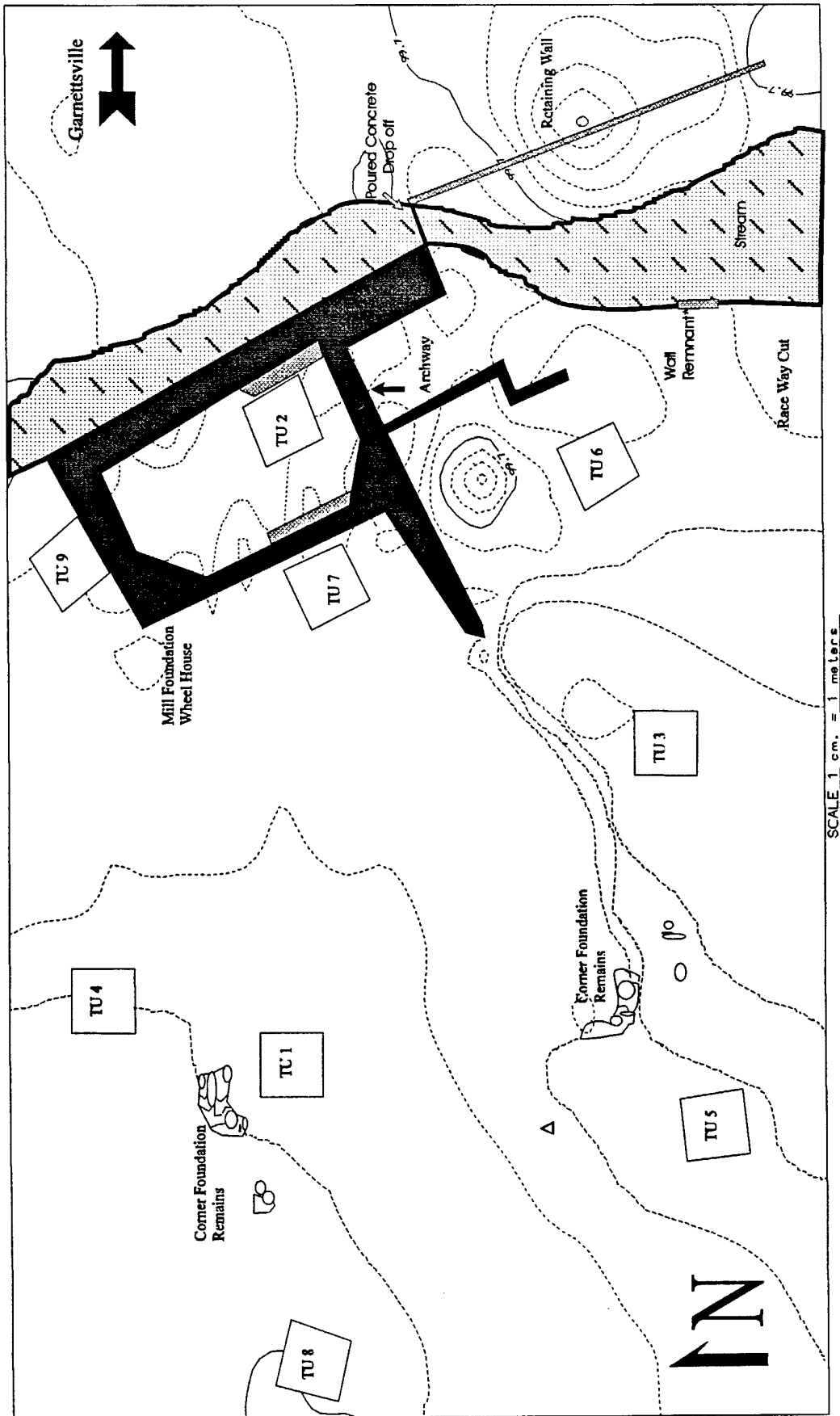


Figure 4. The arch and wall in cutbank at Garnettsville Mill.



Contour Interval = 0.2m

* Indicates old retaining wall facing stream

Stream is Otter Creek Tributary

Δ Datum

Figure 5. The Garnettville Mill site plan.

then channelled over to the mill. A linear depression, much obscured by dense vegetation, leads from the mill area in a southerly direction toward Otter Creek. The water in the tributary stream may also have been harnessed in some fashion to increase the fall. A remnant of a stone wall was noted in the cutbank profile of the tributary stream south of the mill foundation (Figure 4). The wall appears to be heading back into the bank but a unit placed to intercept it failed to locate any additional wall alignment.

Gearing on the westerly side of the wheel would have then transferred power to a shaft which turned the millstones. This mill only had one run of stones; however, it also served as a sawmill. Census data for this mill reported that it had a 16 hp wheel. The amount of reported horsepower is quite high and would require 528,000 foot pounds of water per minute. If the mill had an overshot wheel twelve feet in diameter, its head could not exceed twelve feet or 44,000 foot pounds of water per minute. A breast wheel of the same diameter could have accommodated no more than six feet of head or 88,000 foot pounds of water per minute. It is possible that the census taker added the respective horsepowers of the saw and grist mills together to arrive at the figure of sixteen. However, the dimensions of the wheel house still presents problems that have not yet been resolved with respect to the power generation at this site.

The 1870 census implies that the grist and saw functions were not run simultaneously. The facility may have been set up so that the millstones and saw were set up separately on the same power train, used the same set up and switched out as needed, or the saw may have been powered by some other mechanism (such as a separate flutter wheel).

Archaeological Testing Strategy

In conjunction with the Holmberg report on the known Otter Creek mills, Donald Ball, an archaeologist with the Louisville District, U.S. Army Corps of Engineers, designed a strategy for conducting archaeological testing of the sites. His testing strategy provided the basis for the excavations undertaken by the University of Kentucky at the Garnettsville Mill (15Md185) in the summer of 1995. Ball recommended the following:

1. Preliminary walk-over examination of known mill foundations and adjacent stream (to a distance at least 200 meters upstream of the mill site) in conjunction with an inspection of aerial photographs (both black-and-white and infrared);
2. Clear brush and bushhog (as appropriate);
3. Grid site;
4. Prepare detailed contour map of site and plot all surface visible foundations, dam remnants, etc.;
5. Excavation of two one meter by one meter test units within the extant foundation

(one of these specifically within the spillway aperture); two similar units adjacent to the foundations's outer wall (opposing sides of the structure), and five similar units in the immediate vicinity of the foundation;

6. Examination by means of powered auger holes spaced 10 meters apart of an area 40 meters in width and extending from 40 meters down stream to 60 meters upstream of the foundations;

7. Examination by means of a metal detector of this 40 meter by 100 meter area with all heavy metallic concentrations mapped; and

8. The excavation of not more than five additional test units in this area based on information extracted from aerial photographs, auger holes, and metal detector inspection.

Implementation of this strategy involved some modifications. Specifically, aerial photographs proved to be uninformative because of heavy vegetational cover. Bushhogging was also ruled out because of the tree density and size. Ball also included in his recommendations additional investigation of the rest of the town. Various constraints also resulted in modifications to his strategy. The methodology that was finally adopted and its results are discussed in the next section.

Methodology

Field procedures employed in investigating Garnettsville Mill focused on documenting the cultural and natural stratigraphy, identifying any additional structural or other cultural features that were not readily visible, and assessing the integrity of the site. These data were subsequently analyzed to assess the potential National Register eligibility of the site and the contribution of the mill in addressing historical research issues.

The excavations also served to test some assumptions advanced by Ball (Holmberg 1991: 181). Ball observed that archaeological expectations for mill sites with respect to their preserved deposits are affected by the materials used in the building construction, and the actions of the owners after the mill went out of operation. Specifically, the largely frame construction of most mills, including the one at Garnettsville, would produce "a few inches of midden likely to contain numerous nails and window glass fragments and lesser numbers of door hinges, window pullies [SIC] or weights, and other structural hardware" (Holmberg 1991:181). Ball (Holmberg 1991:181-182) also predicted that, in most cases, the milling machinery would have likely been removed after the mill ceased to operate, and that any machinery parts that may still be left at the site would represent "items long discarded as broken or unserviceable years before a facility ceased to function as a place of business".

The first set of tasks performed included: relocation of the mill from previous documentary evidence (maps, photographs, and site descriptions); photographic documentation of the site and its condition prior to excavation; verbal description of the site,

its condition, and its surrounding environment, including present vegetation, topographic position, elevation, and evidence of disturbances; placement of a site datum and establishment of a 1 x 1 m grid system oriented in a cardinal direction; construction of a detailed map of the site, using a transit showing intrasite and surrounding topography, surface features, site boundaries, grid orientation, subsurface metal deposits located with a metal detector, and locations of shovel probes and test units.

Once these tasks were completed and/or underway, the second stage of activities was initiated. Second-stage tasks were designed to provide preliminary information on artifact distribution and density, and the cultural and natural stratigraphy of the area surrounding the mill. Since some of the original structure of the mill remained intact (an area enclosed by four walls, and the remains of some of the outer structure walls), testing of the area immediately near the mill with shovel probes on the established grid system was not necessary. Shovel probes were used to investigate the extent of some of the architectural features present and to gain an initial indication of soil stratigraphy near the mill. However, shovel probe testing of the ridge just opposite the mill across the stream was conducted to determine if there were any subsurface structures or features associated with the mill on the opposite bank of the stream. Pedestrian reconnaissance was also employed on and near the mill area. Any artifacts on the surface were flagged and mapped onto the topographic site map. The surface survey was conducted 200 m upstream and 100 m downstream from the site in an attempt to locate any features or structures that may have been associated, in particular, the race way leading to the mill.

The third stage of activities was hand excavation of nine 1 x 1 m test units. Test unit placement was based on the density of surface materials, surface topography and slope, location of mill structural remains, and exposure of intrasite stratigraphy as revealed by shovel probes and stream bank profiles adjacent to the mill. The test units were distributed across the site area to examine depositional characteristics and to obtain a representative sample of artifacts. The depth of the test units varied according to stratigraphic demand. All test units were taken to stratigraphic levels that revealed little or no evidence of historic human occupation of the site. Each unit was excavated by zone and level. Zones were identified by differences in soil texture, color, artifact density and other observable distinctions; levels were arbitrarily set at 10 cm. The identification of zones aided the final designation of strata based on major depositional phases (either cultural or natural) that are presented below.

All sediment was screened through 1/4-inch (6.35 mm) wire mesh. Ten liter flotation samples were taken from each natural stratigraphic level as well as one liter chemical samples. Level forms were completed for each unit with plan maps drawn to 1:10 or 1:20 scale at each level and scale drawing profiles of two adjacent vertical walls recorded for each unit. Black and white photographs and color slides document each wall profile. Supplementary photographs were taken to document individual excavation levels or intermediate stages of excavation when appropriate. Any large artifacts which seemed of significant importance were documented with supplementary photographs and plan maps.

The cultural and natural strata discernable in the profiles were drawn and described using standard United States Department of Agriculture (USDA) soil texture, structure, and boundary classifications (USDA, Soil Conservation Service). Colors were standardized using Munsell soil color chart chips.

Results of Investigations

After clearing vegetation from the mill and initial reconnaissance, eight shovel probes and nine test units were excavated at Garnettsville Mill. Given below are descriptions and details of the investigative activities for this site.

Grid Establishment A systematic 1 x 1 m grid aligned to magnetic north was established for the area with the intention of tying it into the previously recorded grid system used in mapping the northern portion of Garnettsville. The grid extended over the entire mill area. All test units were excavated within the confines of the established grid and were assigned a grid coordinate number consistent with the unit's northeast corner.

Walk Over Reconnaissance Completion of a brief walk over reconnaissance of the area in a 15 x 15 m grid upstream 200 m and downstream 100 m from the mill revealed no concentration of artifacts. There were three small pieces of metal examined, but they were of undeterminate age and were not directly associated with the mill. This is not surprising considering the flooding that occurs in this low lying area.

Shovel Probes Excavation of eight shovel probes produced five positive tests. The probes were 40 x 40 cm and all soil was screened through 1/4" wire mesh in arbitrary 10 cm levels. Soil profiles were documented for all shovel probes regardless of presence of cultural material. The probes were placed in the interior and exterior of the mill as well as along the ridge line on the opposite side of the creek bank from the mill. Two of the probes located in the mill area were placed according to high levels of metal identified during the metal detection sweep of the area. These probes produced artifacts similar to those recovered in the test units, but no significantly high metal concentrations. The soil profiles from these probes indicated a heavy amount of alluvium and redeposition from the stream. The depth of these probes were 70-80 cm. None of the probes reached a definable subsoil. The other probe placed within the mill grid area was placed to trace the remains of the stone wall that was revealed in the cutbank of the stream. This wall appeared to be of older construction than the other remaining walls so a shovel probe was placed one meter back from the stream edge along the line of the wall if it extended back away from the stream. The shovel probe did not encounter the wall suggesting that it served as a portion of a retaining wall for the mill and not as part of a support for another structure.

The shovel probes placed on the ridge across the stream from the mill revealed disturbed soils that had apparently been recently bulldozed or otherwise disturbed. Three of the probes revealed artifacts, but they were of a recent nature and not directly associated with either the mill activities or of the time period in which the mill was in operation. None

of the shovel probes placed along the top of the ridge revealed intact, clear stratigraphic levels.

Materials Recovered from Shovel Probes

Mill Foundation Probes:

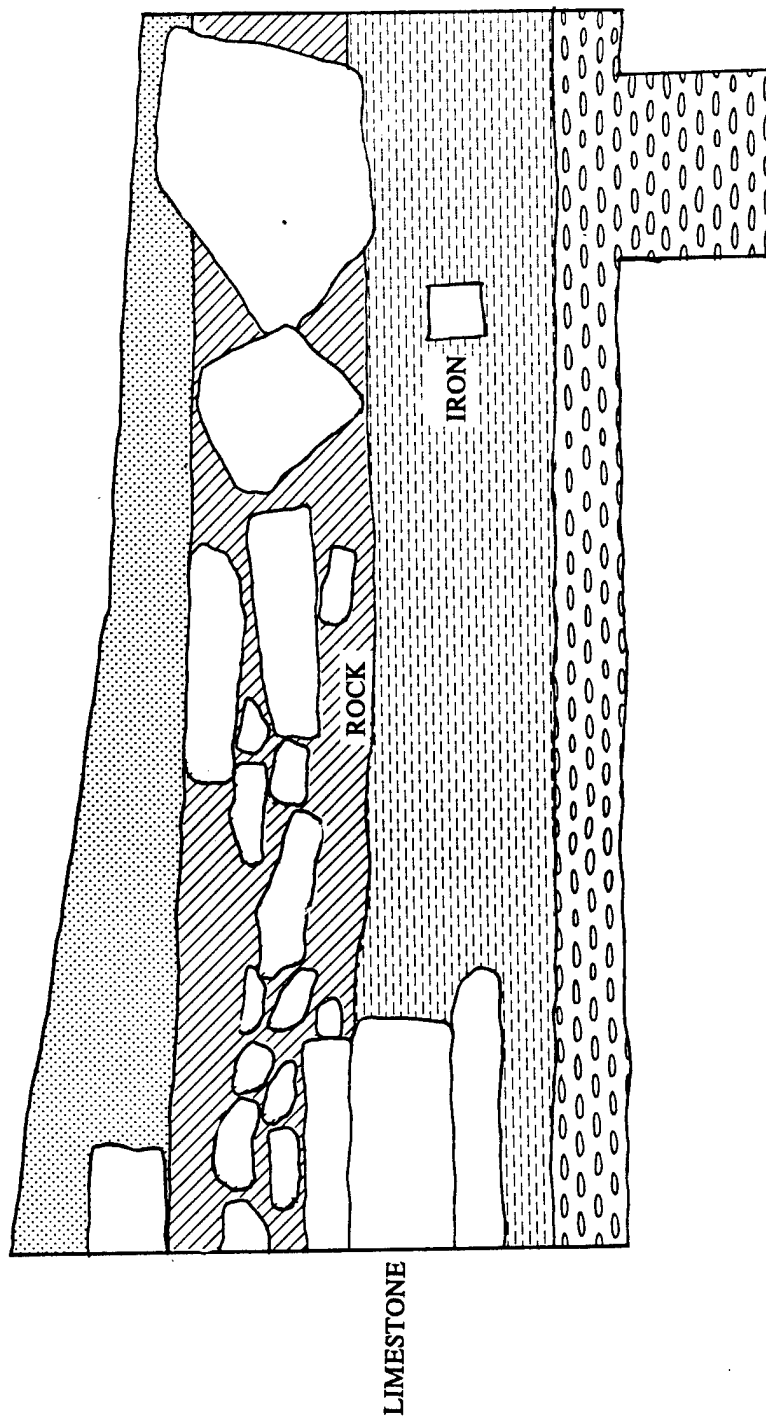
Probe 1	Recreation	2 clear glass bottle/container fragments
Probe 2	Recreation	3 amber glass bottle fragments
Probe 3	Architecture	1 flat glass
Probe 3	Architecture	5 wire nails

Ridgeline Probes:

Probe 3B	Architecture	12 flat glass
Probe 3B	Architecture	2 wire nails
Probe 3B	Household	6 clear glass bottle/container fragments
Probe 3B	Household	1 undecorated whiteware plate sherd
Probe 3B	Household	1 zinc canning jar lid with milk glass liner
Probe 3B	Military	1 hand grenade pin
Probe 3B	Recreation	1 bottle opener
Probe 4	Architecture	1 wire nail
Probe 4	Household	1 aquamarine glass bottle/container fragment
Probe 4	Household	1 metal pot or pan rim
Probe 4	Household	1 porcelain handle (to doll cup?)
Probe 4	Household	1 undecorated porcelain rim
Probe 4	Household	2 undecorated whiteware
Probe 4	Household	2 yellowware spalls
Probe 4	Recreation	6 clear glass bottle/container fragments
Probe 5	Architecture	2 cut nails
Probe 5	Architecture	3 flat glass
Probe 5	Architecture	1 heavy iron latch
Probe 5	Architecture	2 wire nails
Probe 5	Household	8 clear glass bottle/container fragments

Test Unit 1 This unit was placed on the interior of the mill near the west wall. The unit was excavated by natural stratigraphic levels to 1 m below ground surface. It was expected that this test unit would provide artifacts corresponding to interior mill activities at the site. It was also expected that this test unit would have extensive silt deposits because it is on the lower terrace of the site.

Four major strata were recognized in Unit 1 (Figures 6 and 7). Stratum 1 corresponds to the modern A horizon, an organically enriched silty loam varying in thickness from 10-25 cm, depending on the slope of the ground surface.



GARNETTSVILLE MILL
15Md185

Unit 1
North Wall and East Wall

- Stratum 1
- Stratum 2
- Stratum 3
- Stratum 4

Figure 6. Unit 1 profile of the north and east walls.

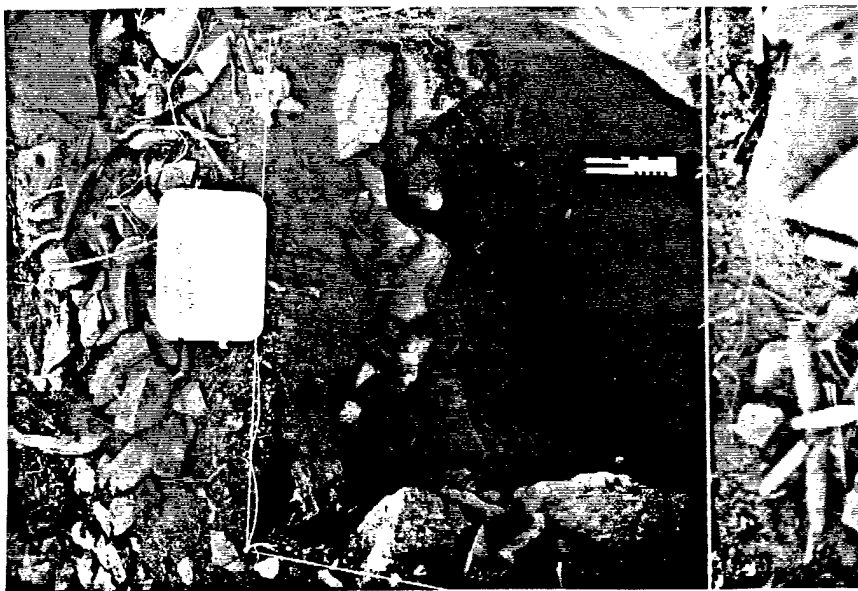


Figure 7. Units 1 and 2.

Stratum 2 contained large displaced foundation stones from the wall of the mill building intermixed with silt that had been deposited as a result of flooding after the building was demolished. This stratum was, on average, 30 cm in thickness, except for the intrusion of a few large foundation stones into the underlying stratum. The silt matrix around the stones varied in color, generally lightening with depth.

Stratum 3 consisted of a silty clay zone with observable lenses of very fine silt and clay. This stratum represents successive flooding episodes that laid down sediment while the building was still standing. This stratum is approximately 30 cm thick. The base of this stratum may terminate at the depth of the lower floor of the building.

Stratum 4 is a river rolled rock and gravel layer mixed with clay, silt and large sand particles. This zone constitutes the natural subsoil and is part of the point bar depositional sequence.

Materials Recovered from Test Unit 1 by Strata:

Surface	Hardware/Industrial	1 large iron gear
Stratum 1	Natural/Prehistoric	3 snail shells
Stratum 2	Architecture	104 flat glass fragments
Stratum 2	Architecture	2 wire nails
Stratum 2	Hardware/Industrial	1 spring (for saw)
Stratum 2	Household	2 glass fragments (1 amber, 1 milk)
Stratum 2	Miscellaneous	1 wire
Stratum 2	Natural/Prehistoric	20 snail shells
Stratum 2	Unidentified	2 corroded iron fragments
Stratum 2	Unidentified	2 leather fragments
Stratum 3	Architecture	8 cut nails
Stratum 3	Architecture	8 flat glass fragments
Stratum 3	Architecture	13 wire nails
Stratum 3	Hardware/Industrial	1 screw
Stratum 3	Hardware/Industrial	1 very large iron nut
Stratum 3	Household	2 animal bone
Stratum 3	Military	4 gas canister parts
Stratum 3	Natural/Prehistoric	1 chert flake
Stratum 3	Recreation	5 bottle glass fragments (clear, liquor, machine made)
Stratum 3	Unidentified	1 brass ring or cap (hand threaded)
Stratum 3	Unidentified	1 flat metal strip (triangular)
Stratum 3	Unidentified	1 possible mica fragment

Test Unit 2. This test unit was placed in the interior of the enclosed limestone section of the mill. The walls of the enclosure were a combination of cement and limestone.

It appeared that the original construction was limestone and the cement was a later addition to modify or repair damage done to the original structure. The unit was excavated by cultural and natural strata and arbitrary 10 cm levels to 90 cm below surface.

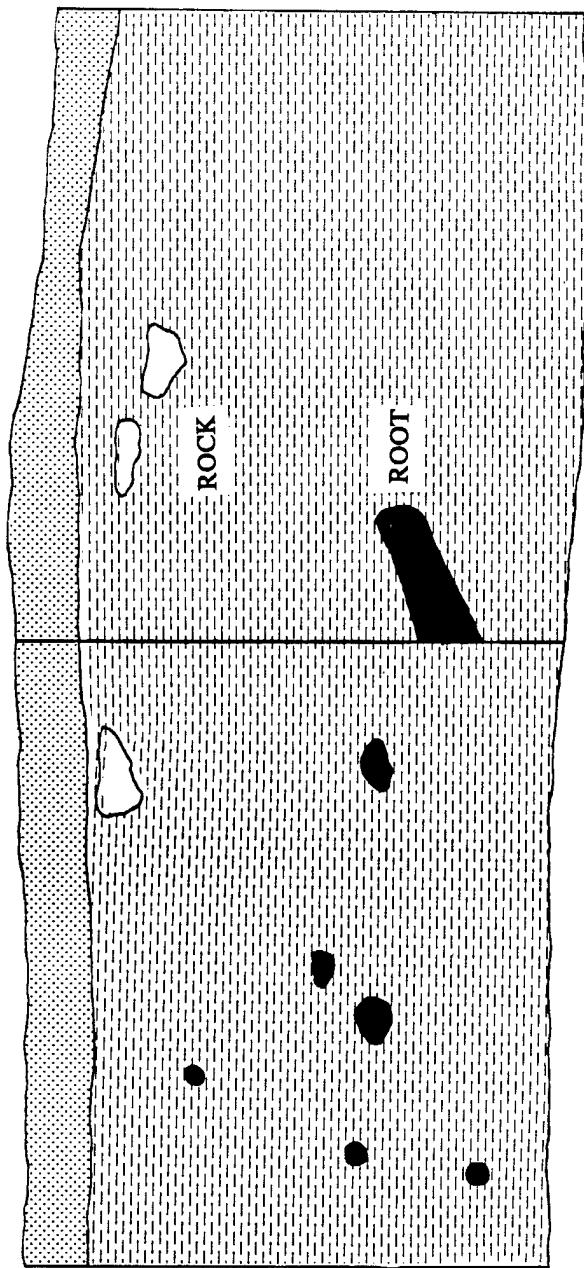
Excavation of Test Unit 2 revealed a very different depositional sequence from the other test units excavated (Figures 7 and 8). There were three distinct zones identified in the field that were combined into two major strata. The first zone corresponds to Stratum 1 discussed above. It extended to 10 cm below surface. The other two zones encountered differed slightly in color and texture (10YR4/4 for zone 2 and 10YR5/4 for zone 3), but both resulted from silt deposition by the stream and correlate to Stratum 3. A slight color and textural change was noted at 58 cm below surface. The excavation terminated at 90 cm below surface when a solid floor was encountered. Stratum 3 in Unit 2 is similar to Stratum 3 described in Test Unit 1 except that there were few artifacts and a higher silt concentration in the soil.

Materials Recovered from Test Unit 2:

Stratum 1	Household	6 bottle glass (4 amber, 1 clear, 1 green)
Stratum 1	Household	1 seed (persimmon)
Stratum 1	Natural/Prehistoric	1 chert flake
Stratum 3	Architecture	1 flat glass (remnants of paint)
Stratum 3	Architecture	4 wire nails
Stratum 3	Hardware/Industrial	1 iron log hook chain
Stratum 3	Hardware/Industrial	1 metal container (trace of a painted label)
Stratum 3	Hardware/Industrial	1 metal pipe elbow
Stratum 3	Household	1 beverage bottle glass fragment (embossed -OO-/REG; light green)
Stratum 3	Household	38 bottle glass fragments (24 clear, 14 amber)
Stratum 3	Natural/Prehistoric	2 snail shells
Stratum 3	Unidentified	1 cloth fragment
Stratum 3	Unidentified	3 metal container fragments (very corroded)
Stratum 3	Unidentified	2 thin sheet metal fragments

The highest concentrations of artifacts in this unit was in Stratum 3. All of the soil deposits in this unit were flood deposits. It is not surprising that there is a low concentration of artifacts for this unit as it is in the interior of the wheel house.

Test Unit 3 This unit was placed on the south, exterior side of the remnant of the mill's south wall. The purpose of the location of this unit was to investigate activities taking place outside the mill to the south where there is slight rise in elevation. This area would not be as subject to siltation and flood deposition as those on the interior and north side of the mill. The unit was excavated in natural stratigraphic zones with arbitrary 10 cm levels to 80 cm below surface. It was expected that the stratigraphy and artifacts recovered from this unit would be different from those recovered in test units on the interior or north side



GARNETTSVILLE MILL
15Md185

Unit 2
South wall and West wall

Stratum 1

Stratum 3

0 20cm

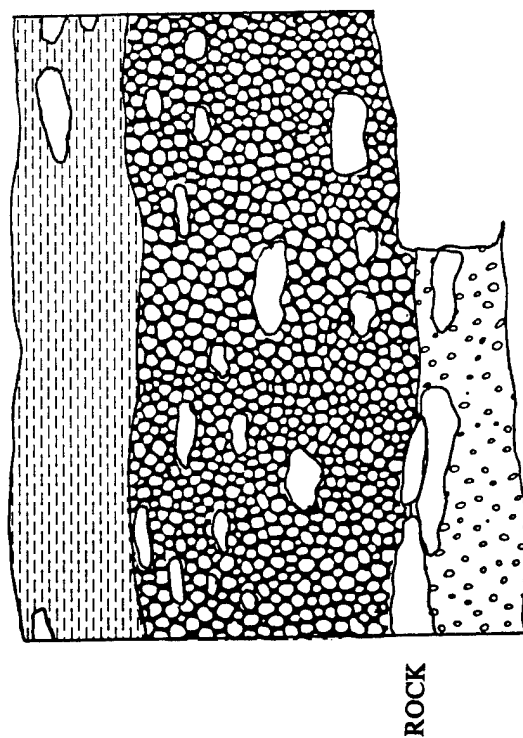
Figure 8. Unit 2 profile of the south and west walls.

of the mill.

Excavation of Test Unit 3 revealed considerable differences in depositional sequence from the test units located on the interior and northern area of the mill (Figures 9 and 10). Stratum 1 is essentially lacking or indistinguishable in this unit. The first 20 cm corresponds to Stratum 3. This stratum contained considerable quantities of nails and flat glass (windowpane) and probably was deposited after the building was demolished. The next stratigraphic layer corresponds to Stratum 5 and extends to 65 cm below surface. This zone contained a high number of large, limestone cobbles and appears to represent successive episodes of fill being dumped in the area south of the mill. Soil texture becomes more compact and clay content increased with depth in this stratum. Stratum 6 was encountered from 65 to 85 cm below surface. This deposit was a gravelly clay very similar to Stratum 4 but possibly a result of cultural rather than natural deposition.

Materials Recovered from Test Unit 3:

Stratum 3	Architecture	2 clear glass oil/kerosene lamp chimney fragments	
Stratum 3	Architecture	70 cut nails	
Stratum 3	Architecture	92 flat glass fragments	
Stratum 3	Architecture	70 wire nails	
Stratum 3	Hardware/Industrial	1 bucket bale	
Stratum 3	Hardware/Industrial	1 cast iron machinery fragment (curved, channelled edge)	
Stratum 3	Hardware/Industrial	1 heavy iron bar (drilled hole; slightly curved)	
Stratum 3	Hardware/Industrial	1 insulated wire fragment	
Stratum 3	Hardware/Industrial	3 large long bolts, threaded at	end
Stratum 3	Hardware/Industrial	1 small nonferrous part (part of flashlight?)	
Stratum 3	Hardware/Industrial	1 thin iron strip	
Stratum 3	Hardware/Industrial	1 threaded bolt	
Stratum 3	Hardware/Industrial	2 wire staples	
Stratum 3	Hardware/Industrial	3 wire fragments (1 barbed)	
Stratum 3	Household	1 animal bone	
Stratum 3	Household	38 bottle glass fragments (1 aquamarine; 37 clear)	
Stratum 3	Household	1 whiteware spall (blue handpainting or flow design)	
Stratum 3	Natural/Prehistoric	18 snail shells	
Stratum 3	Recreation	2 metal crown bottle caps and aluminum cap liner	
Stratum 3	Transportation	6 reflector glass fragments (pressed diamond; disk shaped)	
Stratum 3	Unidentified	1 scrap of sheet lead	
Stratum 5	Architecture	29 flat glass fragments	
Stratum 5	Architecture	13 unidentifiable nails	
Stratum 5	Architecture	13 wire nails (5 pulled)	



GARNETTSVILLE MILL
15Md185

0 20cm

Unit 3
North Wall

Stratum 3

Stratum 5

Stratum 6

Figure 9. Unit 3 profile of the south wall.

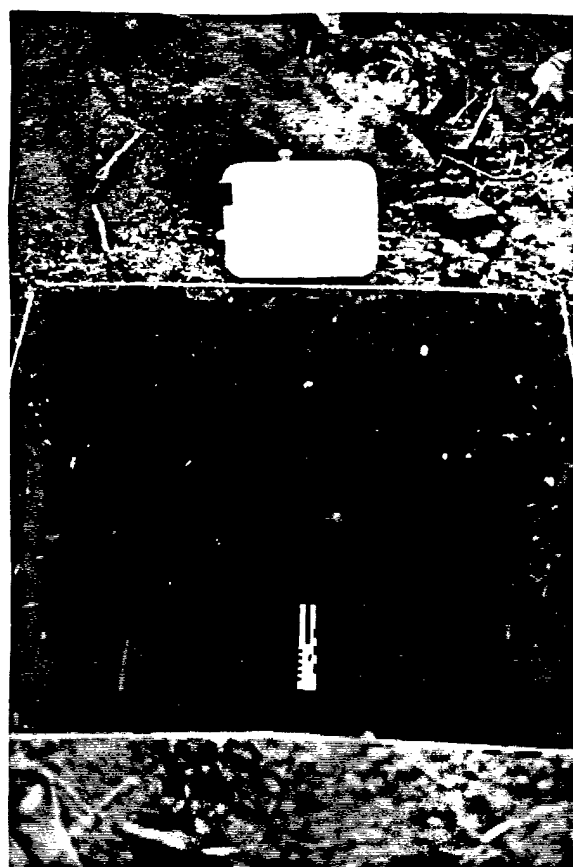
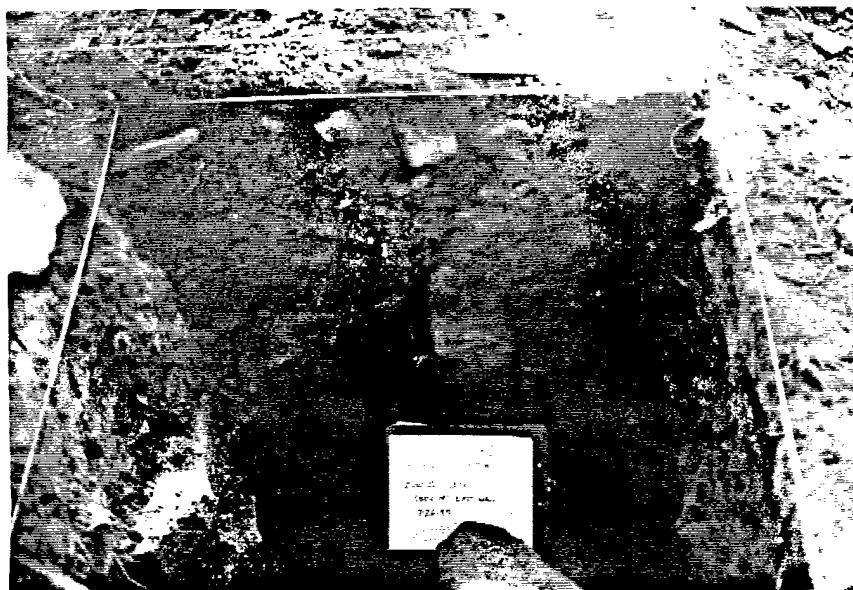


Figure 10. Units 3 (top) and 4 (bottom).

Stratum 5	Hardware/Industrial	3 bolts (heavily corroded)
Stratum 5	Hardware/Industrial	1 brass pin (shear type; small)
Stratum 5	Hardware/Industrial	1 unidentified iron rod
Stratum 5	Household	1 blue edged refined earthenware rim
Stratum 5	Household	1 brown banded yellowware spall
Stratum 5	Household	1 brown/orange banded yellowware sherd
Stratum 5	Household	1 buff salt glazed stoneware sherd
Stratum 5	Household	1 flow blue transferprinted whiteware rim
Stratum 5	Household	1 undecorated pearlware sherd
Stratum 5	Household	4 undecorated refined earthenware sherds
Stratum 5	Household	3 undecorated whiteware sherds
Stratum 5	Household	3 handpainted (gold/green floral) pearlware sherds
Stratum 5	Household	2 pearlware sherds (brown banded rim; handpainted floral)
Stratum 5	Household	5 clear bottle glass fragments (one faceted)
Stratum 5	Household	2 green bottle glass fragments
Stratum 5	Household	4 light green bottle glass fragments (1 probable scroll flask)
Stratum 5	Natural/Prehistoric	3 chert flakes
Stratum 5	Natural/Prehistoric	1 mussel shell
Stratum 5	Natural/Prehistoric	21 snail shells
Stratum 5	Personal	1 brass button with metal eyelet
Stratum 5	Personal	1 2-holed shell button
Stratum 5	Unidentified	1 small uncorroded rod shaped item (possibly a fossil)
Stratum 6	Architecture	1 unidentified nail

The highest concentration of artifacts in this unit was in Stratum 3. This differed from the concentrations present in Test Unit 1. This is due to the fact that the test units located on the north side and interior of the mill are subject to much more frequent flooding than those on the south because of their lower elevation. This deposit probably is a mixture of fill episodes during the mill's use and after it was demolished.

Artifacts from Stratum 5 are notable because the cultural items (excluding such items as snail shells) date to the nineteenth century with no modern items. Stratum 5 probably was deposited while the mill was in use.

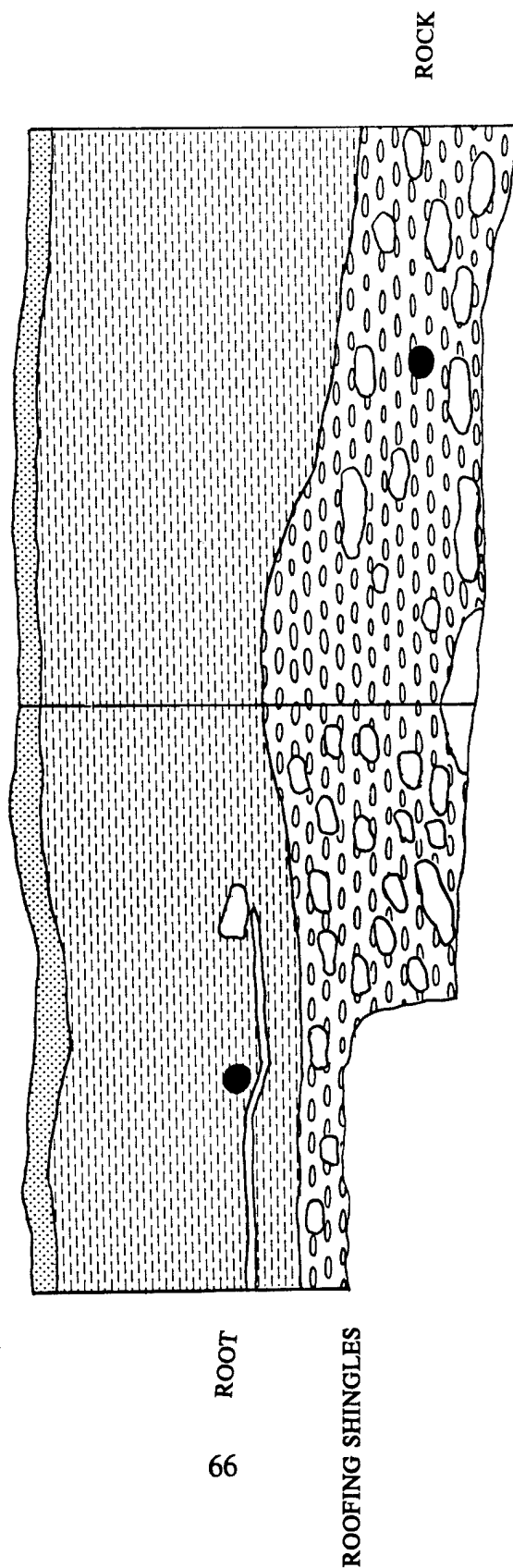
Test Unit 4 This unit was placed on the northern, exterior edge of the mill. It was placed close to Test Unit 1 in order to compare stratigraphic sequences for both units and to compare artifacts recovered from the interior of the mill with those found just outside the foundation. This unit along with Test Units 8 and 9 would be subject not only to more flooding and siltation, but also to occasional scouring of deposits, because of the low elevation and the presence of the mill foundation upslope. Flood waters flowing from the south could, depending on specific circumstances, have been diverted around the mill

foundation and eddied on the downslope side, causing erosion of sediments. Under other circumstances, sediment may have been deposited. The unit was excavated in 10 cm increments by natural stratigraphic zones to 80 cm below surface and revealed Strata 1, 3 and 4 (Figure 10 and 11).

Stratum 1 began at the surface and continued to 6 cm below surface. Stratum 3 continued to 60 cm below surface level. No evidence of wall collapse (Stratum 2) was noted in this unit. A single tar shingle was removed from the upper part of this stratum. Its presence in the redeposited silt of Stratum 3 indicates that it may have been washed down from another part of the site or possibly from off site. Stratum 4 continued to 80 cm below surface level.

Materials Recovered from Test Unit 4:

Stratum 1	Military	1 blank shell casing
Stratum 1	Recreation	1 crown bottle cap with plastic liner
Stratum 3	Architecture	8 cut nails
Stratum 3	Architecture	1 flat glass fragment (very small)
Stratum 3	Architecture	8 unidentified nails
Stratum 3	Architecture	17 wire nails (2 pulled)
Stratum 3	Hardware/Industrial	1 large nut
Stratum 3	Hardware/Industrial	1 machine bolt
Stratum 3	Household	1 light green bottle glass fragment
Stratum 3	Natural/Prehistoric	15 snail shells
Stratum 3	Recreation	2 aluminum bottle cap liners
Stratum 3	Recreation	1 amber glass beer bottle fragment
Stratum 3	Recreation	1 crown bottle cap with plastic liner
Stratum 3	Unidentified	1 asphalt or tar paper fragment
Stratum 3	Unidentified	1 clear glass fragment
Stratum 4	Architecture	17 cut nails
Stratum 4	Architecture	12 flat glass fragments
Stratum 4	Architecture	1 iron handle (possibly for door)
Stratum 4	Architecture	40 wire nails (3 pulled)
Stratum 4	Hardware/Industrial	1 drill bit
Stratum 4	Hardware/Industrial	1 iron washer
Stratum 4	Hardware/Industrial	1 large nut
Stratum 4	Hardware/Industrial	2 screws
Stratum 4	Hardware/Industrial	3 unidentified iron
Stratum 4	Household	1 Albany slip glazed stoneware sherd
Stratum 4	Household	1 brown salt glazed stoneware jug or bottle sherd
Stratum 4	Household	5 clear bottle glass fragments (1 panel type)
Stratum 4	Household	1 pearlware sherd (trace of blue decoration)
Stratum 4	Natural/Prehistoric	5 snail shells



GARNETTSTVILLE MILL
15Md185

Unit 4
North Wall and West Wall

Stratum 1

Stratum 3

Stratum 4

0 20cm

Figure 11. Unit 4 profile of the north and west walls.

Stratum 4 Unidentified 1 flat glass fragment (thick)

Aside from a few recreational items, the bulk of the artifacts from Stratum 3 represents mill-related artifacts. Stratum 4 artifacts are even more clearly mill-related, containing no modern artifacts.

Test Unit 5 This unit was placed on the western exterior edge of the mill to investigate deposits south and west of the mill. The unit was excavated in arbitrary 10 cm levels in stratigraphic strata to a depth of 60 cm below surface. It was expected that the stratigraphy from this unit would be similar to that of Test Unit 3. To some extent, this expectation was fulfilled; however, the profile exhibits some transitional characteristics (Figures 12 and 13).

This unit revealed only three soil strata. Stratum 3 extended to approximately 26 cm below surface level. The next stratigraphic layer was designated as Stratum 5. This stratum is a man-made gravel layer approximately 24 cm thick extending to 52 cm below surface. It was apparently gravel hauled to the site and used, most probably, as road or parking gravel. This interpretation would explain the prehistoric artifact recovered from this strata and also the nonriverine chert and limestone rocks of uniform size removed from this zone. The last stratum correlates to Stratum 4 as described in Test Unit 1. It had few artifacts and was composed of river rolled rock, and silt and clay particles.

Materials Recovered from Test Unit 5:

Stratum 3	Architecture	1 clear chimney glass fragment
Stratum 3	Architecture	16 cut nails
Stratum 3	Architecture	7 flat glass fragments
Stratum 3	Architecture	14 wire nails
Stratum 3	Arms/Ammunition	1 22 cal. casing
Stratum 3	Hardware/Industrial	2 alligator clamps
Stratum 3	Hardware/Industrial	1 threaded bolt
Stratum 3	Hardware/Industrial	2 wire fragments
Stratum 3	Military	1 bullet
Stratum 3	Natural/Prehistoric	4 snail shells
Stratum 3	Personal	1 four-holed shell button
Stratum 3	Recreation	17 bottle glass fragments (2 amber; 13 clear; 2 light green)
Stratum 3	Transportation	1 reflector glass fragments (pressed diamond; disk shaped)
Stratum 5	Hardware/Industrial	1 screw
Stratum 5	Hardware/Industrial	1 wire galvanized nail
Stratum 6	Architecture	19 cut nails
Stratum 6	Architecture	1 flat glass fragment
Stratum 6	Architecture	13 wire nails

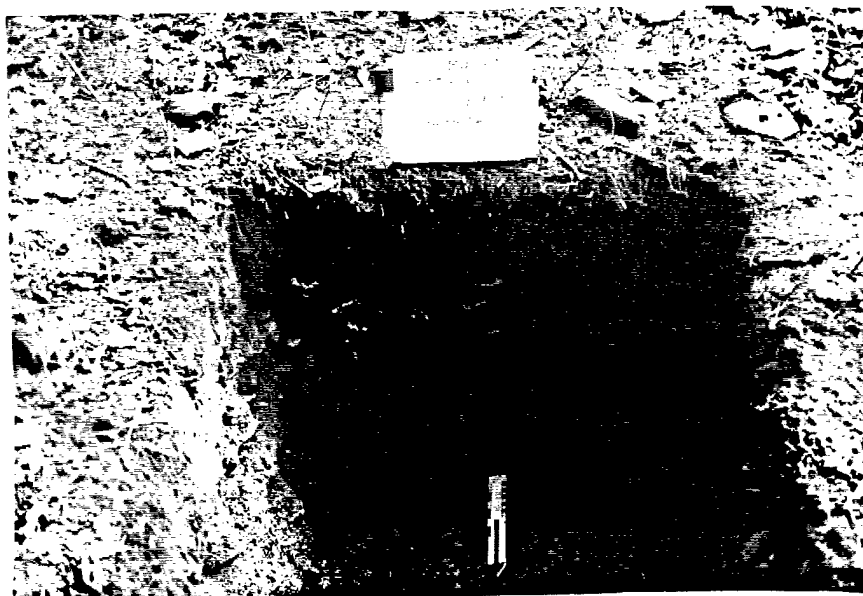
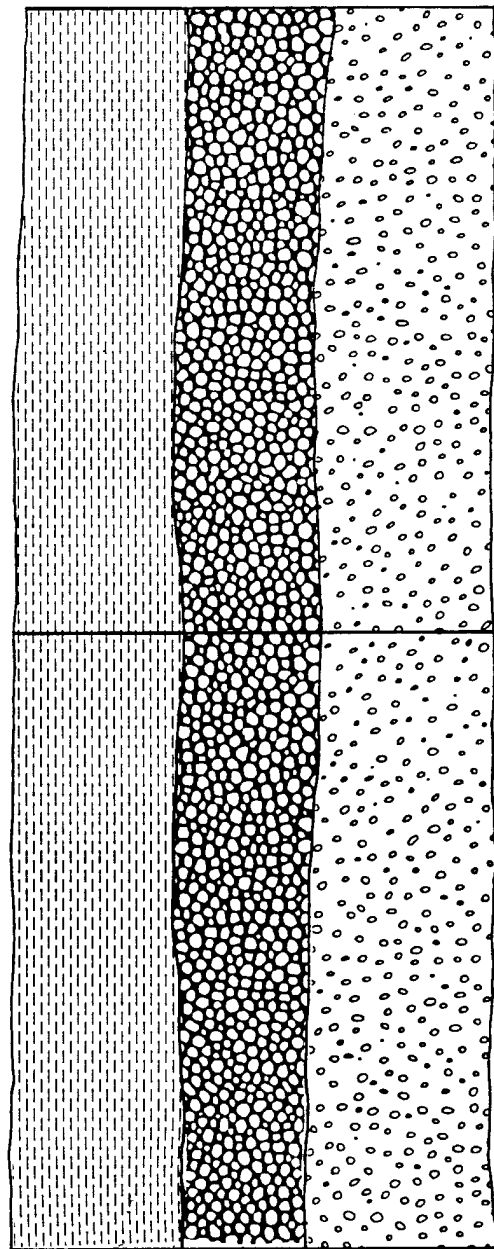


Figure 12. Units 5 and 6.



GARNETTSVILLE MILL
15Md185

Unit 5

West wall and South wall

Stratum 3

Stratum 5

Stratum 6

0 20cm

Figure 13. Unit 5 profile of the south and west walls.

Stratum 6	Hardware/Industrial	2 flat iron strap fragments (square hole)
Stratum 6	Household	1 undecorated whiteware sherd (partial backstamp)
Stratum 6	Natural/Prehistoric	1 chert biface
Stratum 6	Natural/Prehistoric	2 chert flakes

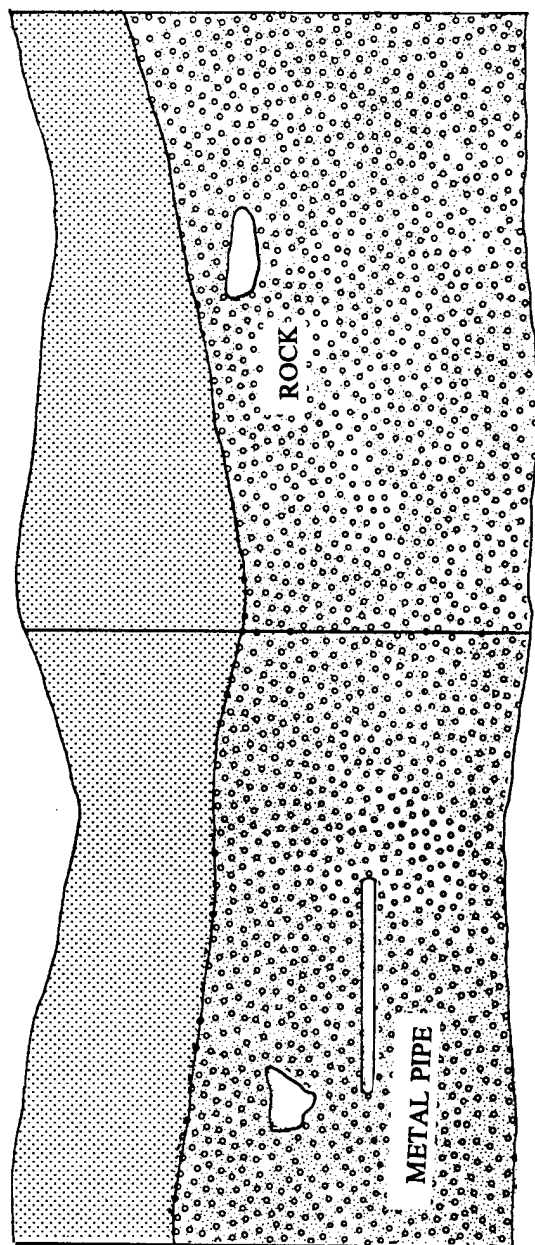
Artifacts from the unit represent a mixture of mill-related and post-abandonment items in Stratum 3, underlain by mill-related artifacts (excluding the chert artifacts) without modern intrusions in Strata 5 and 6. The presence of mill-related artifacts below the gravel layer (Stratum 5) suggests that the gravel was not deposited until later in the mill occupation, probably no earlier than the turn of the twentieth century.

Test Unit 6 This unit was placed on the southeastern edge of the mill site. The unit was placed along the tributary stream with the intention of following a limestone wall that was revealed in the cut bank of the stream. It was also placed to investigate the exterior of the mill near the standing, enclosed wheel house. The wall was approximately two meters long and extended from the base of the stream up 2.3 meters to just below ground surface. From the cut bank profile, it was not possible to detect whether the limestone wall was part of a structure or part of a retaining wall for the mill. This unit was excavated in 10 cm arbitrary levels following natural stratigraphic zones to 80 cm below surface (Figures 13 and 14).

The first zone correlates to Stratum 1 as described in Test Unit 1 which extended to 20 cm below surface. The next stratigraphic zone which extends down to 80 cm below surface was designated as Stratum 5A. The stratum was similar to Stratum 5 because it represented a fill episode; however, it did not include the high density of gravel noted in Unit 5. This zone had the highest artifact content and contained the two portions of the gearing assembly recovered (Figure 12). A 1926 penny was rusted to one of the gears. These were encountered at 40 cm below surface.

Materials Recovered from Test Unit 6:

Stratum 1	Architecture	7 flat glass fragments
Stratum 1	Architecture	7 wire nails
Stratum 1	Hardware/Industrial	2 metal sheet fragments (brass and iron)
Stratum 1	Hardware/Industrial	1 iron shaft fragment
Stratum 1	Hardware/Industrial	1 wire fragment
Stratum 1	Household	1 Bristol glazed/Albany slip glazed stoneware sherd
Stratum 1	Household	10 clear bottle/container glass fragments
Stratum 1	Household	1 undecorated whiteware sherd
Stratum 5A	Architecture	23 flat glass fragments
Stratum 5A	Architecture	12 unidentifiable nails
Stratum 5A	Architecture	28 cut nails
Stratum 5A	Architecture	115 wire nails
Stratum 5A	Arms/Ammunition	1 22 cal. casing



GARNETTSVILLE MILL
15Md185

Unit 6
North wall and East wall

Stratum 1
Stratum 5a

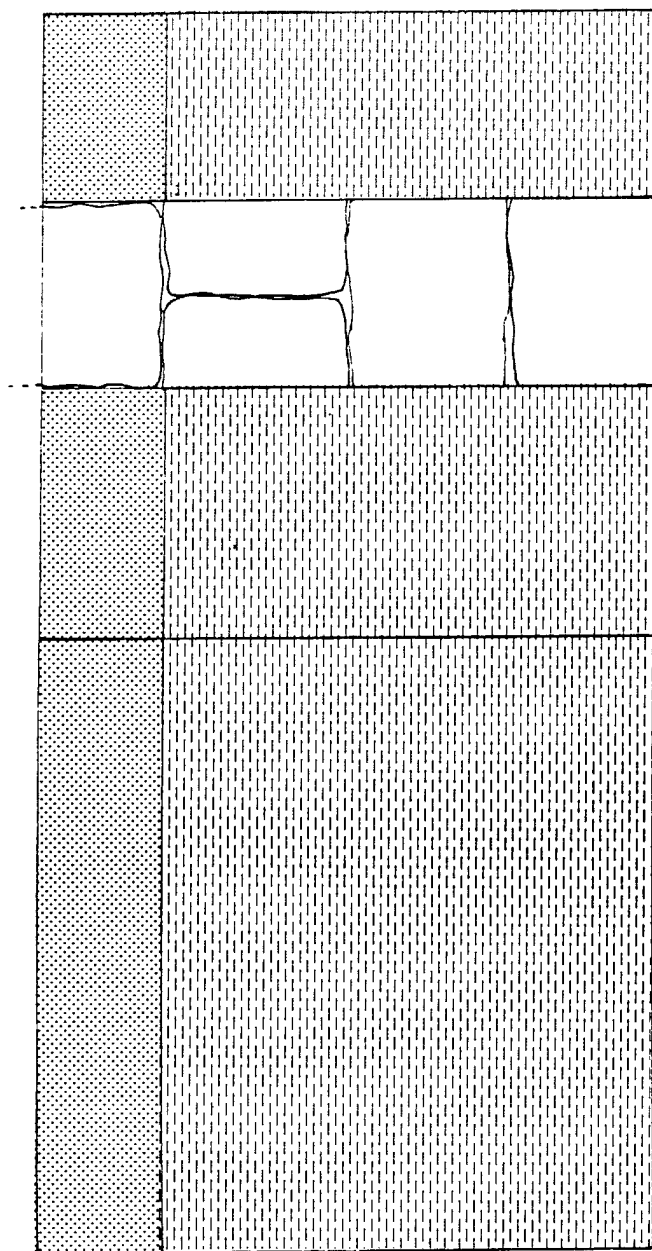
Figure 14. Unit 6 profile of the north and east walls.

Stratum 5A	Exchange	1 Lincoln head penny (dated 1926)
Stratum 5A	Hardware/Industrial	1 circular whetstone fragment
Stratum 5A	Hardware/Industrial	1 bolt fragment
Stratum 5A	Hardware/Industrial	1 bolt with nut
Stratum 5A	Hardware/Industrial	1 brass or copper rivet
Stratum 5A	Hardware/Industrial	1 flat iron disk
Stratum 5A	Hardware/Industrial	2 folded sheet metal and flat iron strip
Stratum 5A	Hardware/Industrial	1 heavy bolt
Stratum 5A	Hardware/Industrial	1 iron rod
Stratum 5A	Hardware/Industrial	1 iron bar
Stratum 5A	Hardware/Industrial	1 iron pipe
Stratum 5A	Hardware/Industrial	2 thin sheet iron strips
Stratum 5A	Hardware/Industrial	1 unidentified iron part
Stratum 5A	Hardware/Industrial	1 unidentified metal item
Stratum 5A	Hardware/Industrial	8 wire (2 brass; 6 iron)
Stratum 5A	Hardware/Industrial	1 wire staple
Stratum 5A	Household	1 undecorated whiteware sherd
Stratum 5A	Household	4 Bristol glazed/Albany slip glazed stoneware
Stratum 5A	Household	18 bottle glass fragments (11 clear; 2 amber; 1 green; 4 aquamarine)
Stratum 5A	Household	1 clear pressed glass fragment (diamond motif)
Stratum 5A	Natural/Prehistoric	1 chert flake
Stratum 5A	Natural/Prehistoric	27 snail shells
Stratum 5A	Unidentified	4 rubber fragments

Most of the artifacts from this unit are probably mill-related and no clearly modern intrusive artifacts were identified.

Test Unit 7 This unit was located directly adjacent to the west wall of the wheel house to investigate the depth of the interior wall associated with the wheel house. It was also located to examine stratigraphy and collect artifacts associated with activities taking place within the mill. This area would have correlated to the basement of the mill where old gears and equipment may have been disposed of or stored. The unit was excavated in 10 cm arbitrary units to 75 cm below surface (Figure 15).

The stratigraphy in this unit exhibited what appeared visually as a sequence of Stratum 1 underlain by Stratum 3; however, the artifacts indicate that the deposition of the sediments was complicated by agents that mixed the flood silts. The first zone correlating to Stratum 1 extended to 5 cm below surface. The second zone correlated to Stratum 3 and extended to 75 cm below surface. There were several silt and sand lenses within this strata that were not evident in Test Unit 1. Regardless of the lenses, the entire stratigraphic zone between 5 and 75 cm below surface was assigned to Stratum 3. Water was encountered below 75 cm and terminated excavation. This unit did not reveal Stratum 4 or any other comparable sterile soil nor did it find the vertical terminus of the wall before water was



MILL FOUNDATION WALL

0 20cm

GARNETTSVILLE MILL
15Md185

Unit 7
North wall and East wall

Stratum 1

Stratum 3

Figure 15. Unit 7 profile of the north and east walls.

reached.

Materials Recovered from Test Unit 7:

Stratum 1	Hardware/Industrial	1 eyed needle with threaded end
Stratum 1	Natural/Prehistoric	8 snail shells
Stratum 1	Recreation	2 clear glass bottle/container fragments
Stratum 1	Recreation	1 metal bottle cap
Stratum 3 (upper half of stratum)		
Stratum 3	Architecture	64 flat glass fragments
Stratum 3	Architecture	4 unidentifiable nails
Stratum 3	Exchange	1 Lincoln head penny (dated 1936)
Stratum 3	Household	2 aquamarine glass bottle/container fragments
Stratum 3	Household	2 clear glass bottle/container fragments
Stratum 3	Natural/Prehistoric	1 snail shell
Stratum 3	Recreation	112 clear glass bottle fragments
Stratum 3	Recreation	7 clear glass bottle/container fragments
Stratum 3	Recreation	4 cobalt glass bottle/container fragments
Stratum 3	Recreation	1 machine made clear glass bottle rim
Stratum 3	Recreation	1 metal crown bottle cap
Stratum 3 (lower half of stratum)		
Stratum 3	Exchange	1 Lincoln head penny (dated 1963)

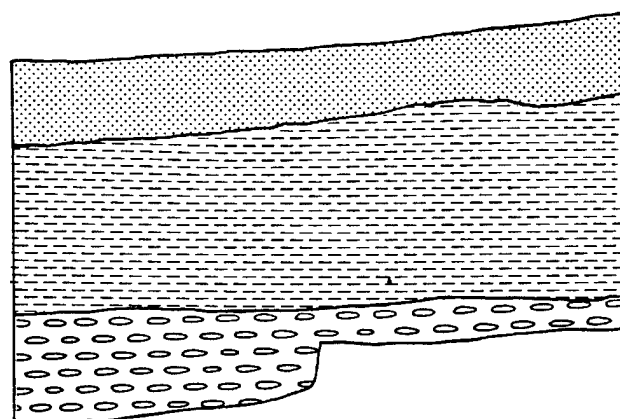
The recovery of a 1936 penny stratigraphically above a 1963 penny suggests that the flood deposits in this unit are mixed. The location of the unit within the corner of the stone foundation may provide an explanation. If floodwaters were traveling with considerable velocity, they may have flowed over the wall foundation and struck the inside lower surface with sufficient force to cause eddying and erosion. Other floods of lesser velocity may have resulted in silt-laden water collecting in the foundation, and dropping its sediment load as its velocity slowed.

Test Unit 8 This unit was located on the northwestern, exterior portion of the mill. It was placed to examine the stratigraphy on the north exterior of the mill. The unit was excavated in 10 cm arbitrary levels in natural stratigraphic zones to 68 cm below surface (Figure 16).

The first zone correlates to Stratum 1 and extends to approximately 12 cm below surface. The second zone encountered correlates to Stratum 3 and extends to approximately 50 cm below surface. The third zone encountered correlates to Stratum 4 and extends to 68 cm below surface.

Materials Recovered from Test Unit 8:


Stratum 3	Architecture	20 flat glass fragments
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


0 20cm

GARNETTSVILLE MILL
15Md185

Unit 8
East wall

Stratum 1 

Stratum 3 


Stratum 4 

Figure 16. Unit 8 profile of the east wall.

Stratum 3	Architecture	28 cut nails
Stratum 3	Architecture	1 unidentifiable nail
Stratum 3	Architecture	52 wire nails
Stratum 3	Arms/Ammunition	2 22 cal. casings
Stratum 3	Hardware/Industrial	1 fuse
Stratum 3	Hardware/Industrial	4 nonferrous sheet metal fragments
Stratum 3	Hardware/Industrial	1 folded sheet metal fragment
Stratum 3	Hardware/Industrial	1 iron bracket
Stratum 3	Hardware/Industrial	1 iron rod
Stratum 3	Hardware/Industrial	1 screw
Stratum 3	Household	15 clear glass bottle/container fragments
Stratum 3	Household	3 clear glass tumbler rims
Stratum 3	Household	2 undecorated whiteware sherds
Stratum 3	Household	1 Albany slip glazed stoneware/yellowware sherd
Stratum 3	Household	3 salt glazed/Albany slip glazed stoneware sherd
Stratum 3	Recreation	20 clear glass bottle/container fragments
Stratum 3	Recreation	1 light green glass bottle/container fragment
Stratum 3	Recreation	2 metal bottle caps
Stratum 4	Architecture	6 cut nails
Stratum 4	Architecture	1 flat glass fragment
Stratum 4	Architecture	16 wire nails
Stratum 4	Hardware/Industrial	1 nut

Test Unit 8 was located in a low-lying area where scouring of flood deposits could have occasionally taken place in addition to the addition of water-deposited sediments. Stratum 3 artifacts concentrated more heavily in the lower depths of the zone.

Test Unit 9 This unit was located north of and adjacent to the standing walls of the wheel house. It was placed to investigate the possibility of a water escape hole present on the north side of the wheel house. The unit was excavated in 10 cm arbitrary levels in natural stratigraphic zones to 60 cm below surface level. Due to time constraints and the intention of this unit to investigate the north wall of the wheel house, the unit was reduced to 1 x .5 m at 25 cm below surface. After this depth, only the southern half of the unit was excavated to determine if the tail water could have flowed out of the wheel house through the north side.

Two soil strata were encountered during excavation (Figure 17). The first corresponds to Stratum 1 and extended to 10 cm below surface. The second zone was a compact, sterile clay extending to 60 cm below surface; however, since it represented flood deposits, it was included under Stratum 3. Slight differences in sediment color or texture are more due to the unit's location near the tributary stream. However, the mechanism by which deposits accumulated in this unit was the same as for Stratum 3 elsewhere. Excavation of the unit ceased because water was encountered at 55 cm below surface.

Opportunistic investigation of a crayfish burrow located on the southern edge of the test unit along the wall of the wheel house revealed no water escape hole. The burrow was investigated by hand to 1.5 m below surface and the only evidence of activity was a live crayfish annoyed with the excavator's intrusion into its burrow, and its not so gentle reminder to the excavator to remove his hand.

Materials Recovered from Test Unit 9:

Stratum 3	Architecture	7 flat glass fragments
Stratum 3	Architecture	3 unidentifiable nails
Stratum 3	Hardware/Industrial	1 bolt
Stratum 3	Hardware/Industrial	1 brass lead with fragment of insulated wire
Stratum 3	Household	2 aquamarine glass bottle/container fragments
Stratum 3	Recreation	1 metal bottle cap

The low concentration of artifacts from this unit is due to the location of the test unit so close to the stream. Many artifacts would have been washed downstream from this unit and since there is a wall directly to the south of the unit, no other artifacts would have been washed into the unit.

Summary of Stratigraphy at the Garnettsville Mill

Stratum 1: Humic layer of a medium brown silt loam. High organic content with root intrusions, etc.

Stratum 2: Zone of wall collapse intermingled with flood deposits.

Stratum 3: Flood deposited silt loam. Variable color and soil texture, depending on location; may exhibit lenses of lighter or darker silts and clays.

Stratum 4: River rolled rock and gravel intermingled with light brown and yellow clay-silt loam. Has large granules of sand and some silt deposits. Indicative of natural subsoil and part of point bar sequence.

Stratum 5: Gravel deposition probably of cultural origin; represents a series of fill episodes associated with the mill's use. 5A is a variation of this stratum.

Stratum 6: Compact clay with small quantities of river rolled rock. Stratum underlies Stratum 4 and is part of the natural point bar sequence.

Materials Recovered

Artifacts recovered during test excavations at the Garnettsville Mill were washed,

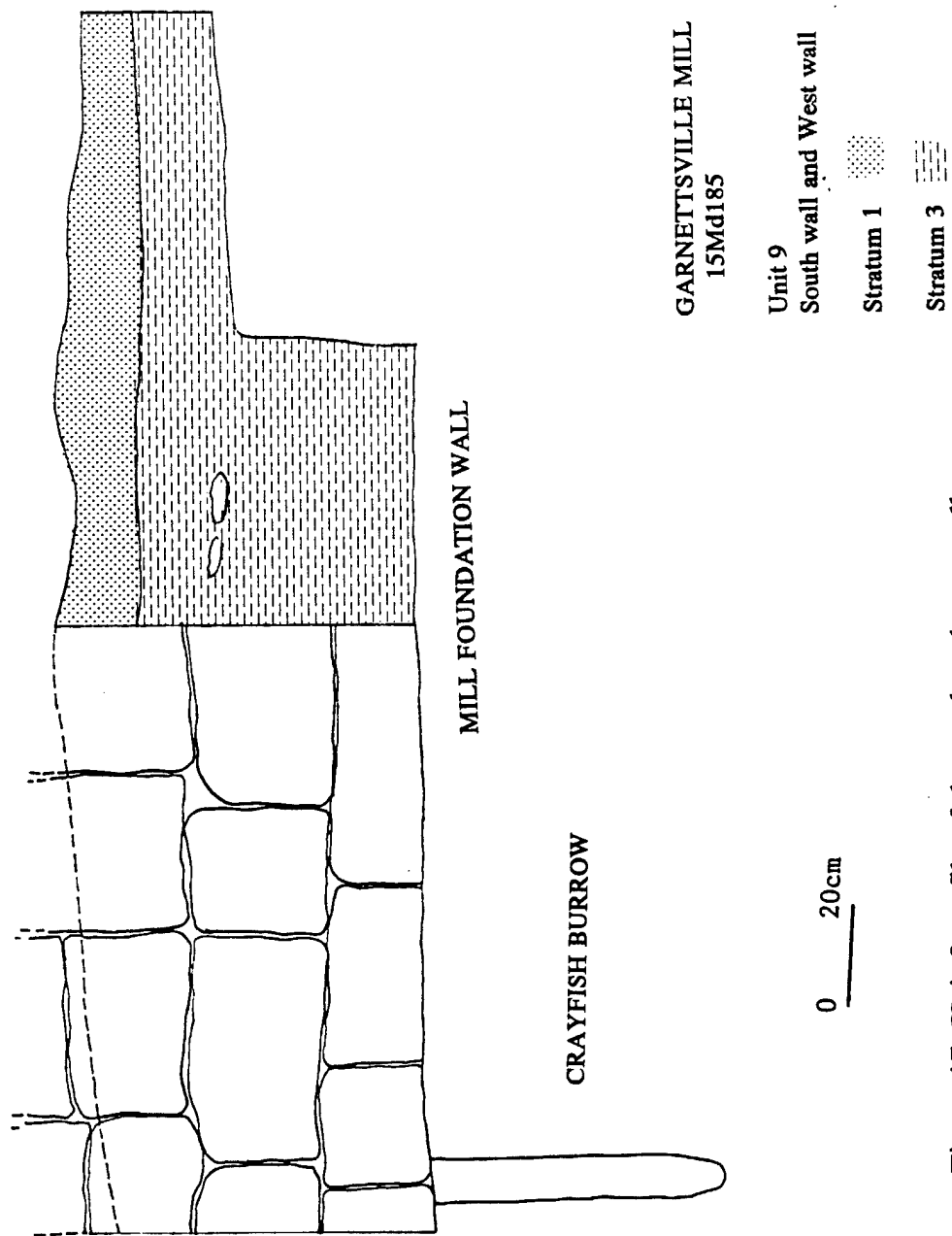


Figure 17. Unit 9 profile of the south and west walls.

catalogued and conserved (if necessary) at the archaeological laboratory facilities for the Program for Cultural Resource Assessment in Lexington. Preservation quality was variable among the material types with ferrous metal and organic materials such as bone and textiles being very poorly preserved and other materials (primarily glass and ceramic) being fairly well preserved. The artifacts were analyzed within a functional classification. Major functional categories were relatively few and reflect not only the site's primary use as a mill but also later post-abandonment usage or impact (military and recreational use, for example). The artifact assemblage contained relatively few domestic, personal or other types of artifacts commonly associated with households. The total frequency of items is 1684 specimens which represents a quite low density of artifacts at the site.

The functional category with the highest frequency of artifacts is Architecture, comprising 61% of the total assemblage (Table 1). The next highest category, Household, comprises only 12% of the assemblage. Remaining categories are either very low in frequency or, as in the case of Recreation and Natural/Prehistoric which exceeded 100 specimens, are unrelated to the mill's use for milling.

Table 1. Frequency of Artifacts from Major Functional Categories.

Major Functional Category	Frequency
Architecture	1018
Arms/Ammunition	4
Exchange	3
Hardware/Industrial	85
Household	205
Military	7
Natural/Prehistoric	134
Personal	3
Recreation	193
Transportation	7
Unidentified	25

Architecture

This category, although the highest in frequency of items, contained a very limited number of artifact types. The Architecture group is dominated by flat glass that was probably from windowpanes, and nails. Other minor artifact types include lamp chimney

glass, a heavy iron latch and an iron handle. The latter two might more appropriately be placed in the Industrial category since they could have belonged to a piece of milling equipment rather than being part of the mill structure.

Windowpane glass is represented by 364 fragments, one of which retained remnants of paint. A sample of 133 fragments were measured for thickness, following the methodology of Roenke (1978) who identified a correlation between pane thickness and date of manufacture. Roenke and other researchers have documented that flat glass gradually increased in thickness for most of the nineteenth century, an increase attributable to increases in pane size and changes in production methods. Since the Garnettsville mill was first erected around 1806 and remained in operation during most of the nineteenth century, the flat glass assemblage should reflect the installation and periodic replacement of windowpanes over that time period. Pane thickness ranged from .063 to .125 inches. When graphed by thickness and frequency (Figure 18), the measurements form a bimodal curve.

The mean for the total sample is .1 inch. The median thickness is very similar at .097 inch. However, the most frequent thicknesses of the bimodal distribution are .086 and .122 and these thicknesses more accurately characterize the clustering in the distribution. If the sample is divided at the median point, and means recalculated, the thinner glass averages .085 inch while the thicker sample averages .115 inch. In comparing these average thicknesses with Roenke's suggested age ranges (using Pacific Northwest samples), the earlier thinner glass falls within the thickness measurements of structures built between 1855 and 1885 while the thicker group falls in a chronological range after 1910. Comparison to Kentucky sites and to Moir's (1987) table on predicted thickness/date correlations essentially reaches the same conclusion. With respect to conclusions about what these findings mean for the Garnettsville mill, it is possible that the earliest mill building had no or very few windows, or that the building was replaced completely or refurbished with new windows many years later.

Both cut and wire nails were recovered from the excavations. Cut nails number 220 specimens. Wire nails are more numerous with 385 specimens. Both types are generally in an extremely poor state of preservation. The cut nails are earlier in date than the wire nails. Wire nails began to dominate the nail market by the 1890s, and would have been used in late nineteenth century refurbishing and repair of the mill.

Other possible architectural artifacts include a heavy iron latch and an iron handle that may have been attached to some type of door (Figure 19).

Arms/Ammunition

This category is limited to four 22 cal. casings which were probably from hunting activities on the post. None of the casings are marked, and could not be precisely dated. Bullets of this caliber have been made since 1845 and enjoy immense popularity for target

FLAT GLASS THICKNESSES **Garnettville (15Md185)**

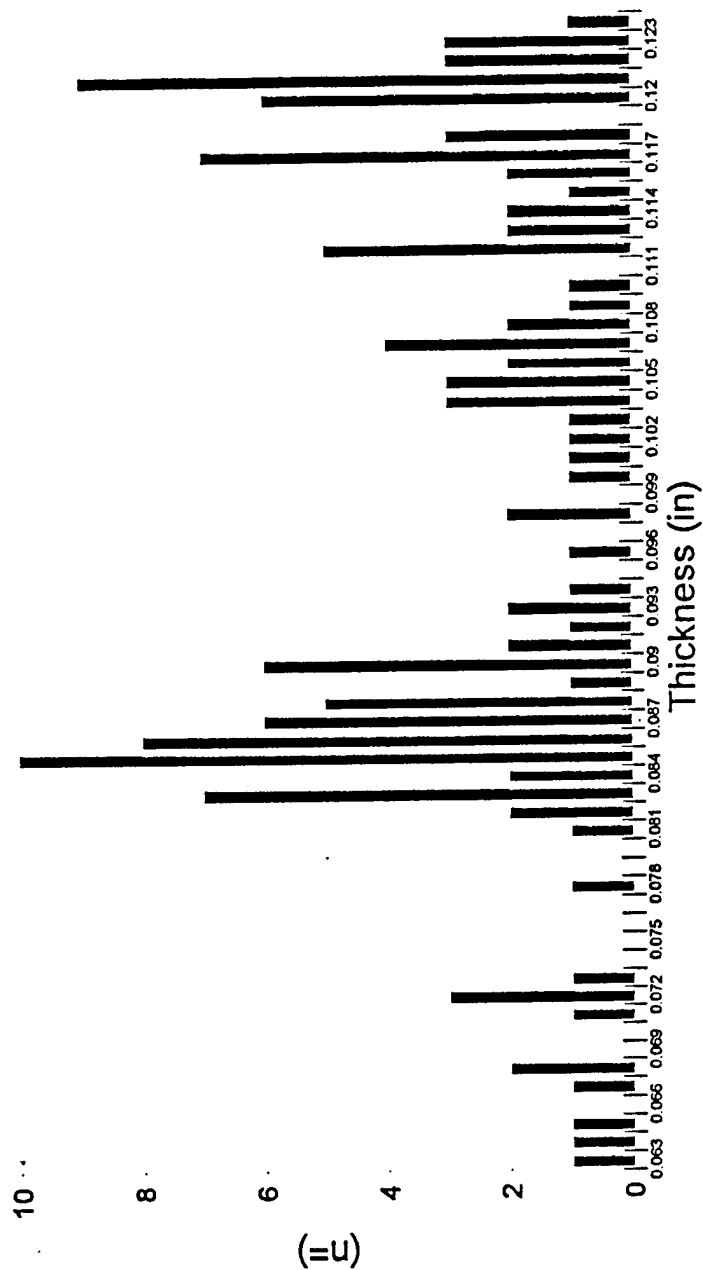


Figure 18. Distribution of flat glass thickness from the Garnettville Mill.

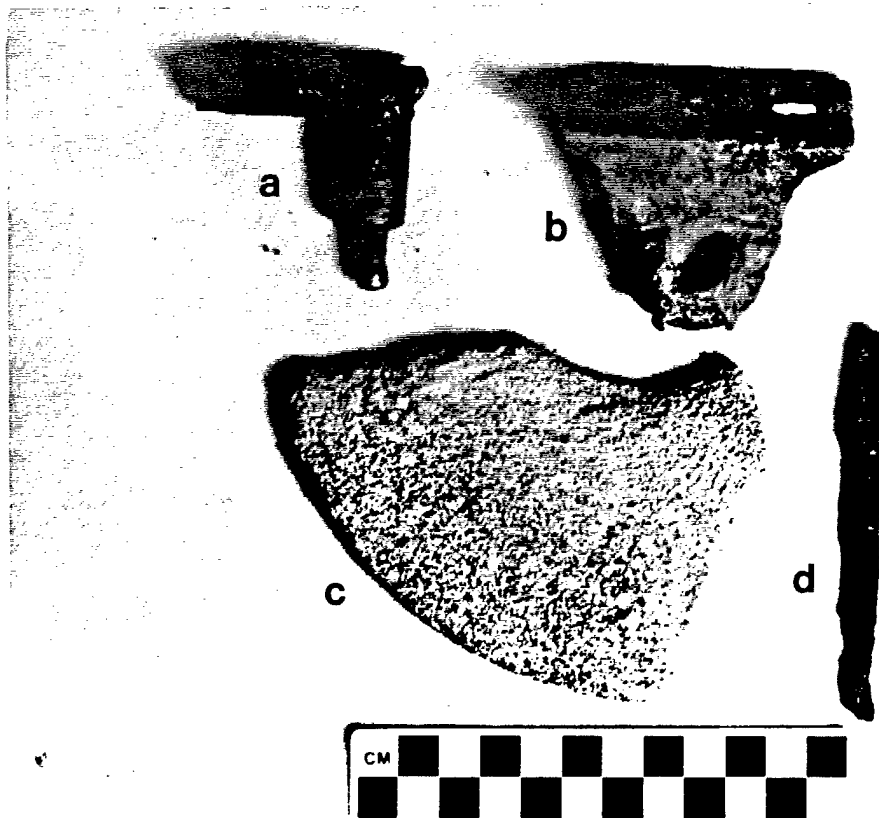


Figure 19. Architectural and Hardware/Industrial artifacts.

and sport shooting. These casings could be the result of hunting or target practice either before or since federal acquisition.

Exchange

The exchange category includes three Lincoln head pennies, dating 1926, 1936, and 1963.

Hardware/Industrial

The Hardware/Industrial category accounted for only 94 artifacts but they were variable in type. These items are listed below. Of particular interest are a circular whetstone fragment, a drill bit, a large log hook chain, large iron gear fragments, a large iron thrust bearing, an iron spring, two alligator clamps, a heavy iron bar that is slightly curved and a cast iron part with a curved channelled edge. These items appear to be good candidates for being directly related to the milling use.

The whetstone could have been used to sharpen the chisels used to dress the millstones. It measures approximately eight inches in diameter and is made of a fine grained, loosely cemented material (Figure 19c). Two of the broken edges have small metal pins that are embedded into the material. The material is probably corundum, a natural abrasive stone that was frequently ground up and reconstituted with a binder for grindstones.

The drill bit is a fairly heavy duty one, measuring four inches in length (Figure 19d). It probably could have drilled a hole measuring approximately 3/8 to 1/2 inch in diameter.

The log hook chain (Figure 20b) and the spring (Figure 20a) could have been used in the sawmill activities at the mill (Figure 20). The spring is a flat strap of iron that is squared off and slotted in one end, increases slightly in width toward the middle then is reduced to a narrow rectangular cross-section at the other end which has a barred and slotted termination. It could have been part of a crank mechanism. Hunter (1979:89-90) characterizes the use of metal in milling equipment as "sparing" prior to the late nineteenth century. Sawmills required metal saws and cranks while the millwork assembly used metal for spindles, rynds, steps, damsels and bray irons, and gudgeons in the wooden water wheel itself. The predominance of wood persisted to the Civil War years with the principal exceptions being "the gradual replacement of the old-style wooden cog-and-stave gear wheels by cast-iron spur and bevel gear wheels" (Hunter 1979:90).

The gear fragments and bearing are quite large (Figure 21). The gear was originally circular with a diameter of approximately six feet. It is a mortise spur gear in which wooden teeth are set on an iron rim (Robert Howard, personal communication 1996). The gear was cast in separate pieces which were then attached together. It probably was driven directly by the water wheel, and served to speed the rotation of the shaft to which it was attached. Its shaft may have been connected directly to the millstones. The bearing is bucket shaped

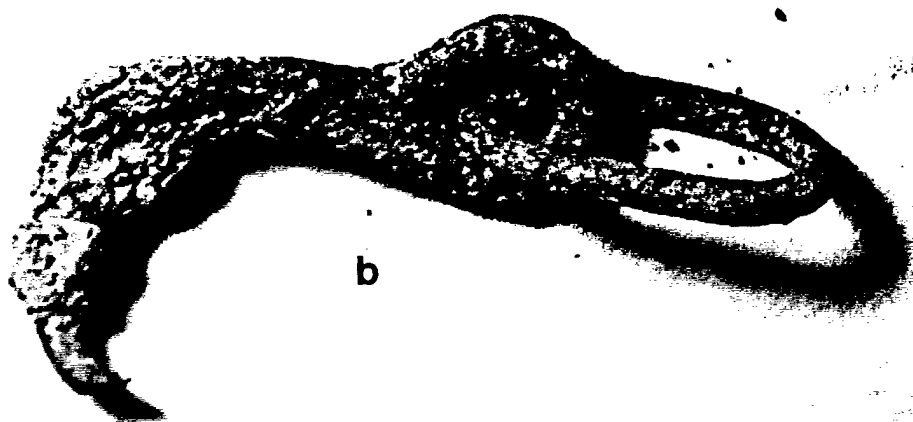
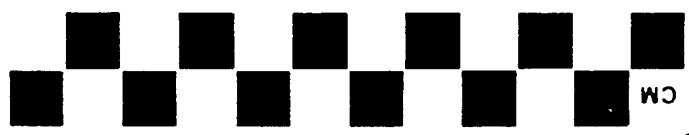


Figure 20. Hardware/Industrial artifacts.

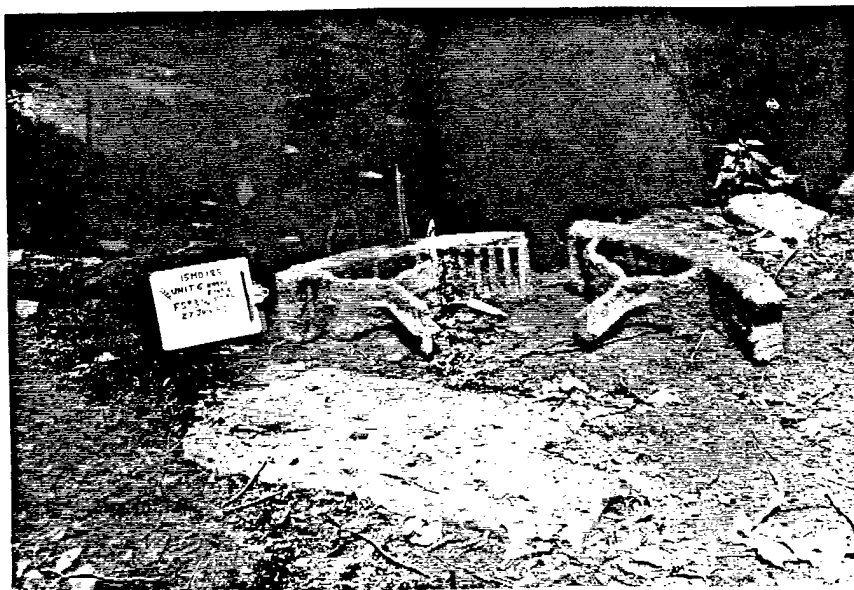


Figure 21. Large gear fragments.

with an interior post that comes up from the base. It was meant to support considerable weight and may have fitted on the end of the shaft holding the millstones. The alligator clamps probably were used to attach leather or canvas belt sections together for use on a conveyor belt.

The heavy iron bar and the cast iron part share the same provenience (Figure 22). The bar has a gentle double curve and is loaf-shaped in cross-section (Figure 22a). A hole is drilled in one end. The other end appears to have snapped off. The cast iron part is fragmentary but retains two original edges (Figure 22b). One edge is curved with an interior ledge; the other edge is straight. When the artifact is stood on the straight edge with the molded exterior facing the view, it leans forward. In this orientation, the ledge on the curved edge is on the interior side, and could have been intended as a stop of some kind. A definite identification of these items was not made.

Other artifact types classified under Hardware/Industrial include such items as iron strap fragments, sheet metal, wire, bolts, nuts and washers, and other specimens that could have had a wide variety of uses.

Table 2. Artifacts Classified as Hardware/Industrial.

Artifact Type	Frequency
flat iron disk	1
flat iron strap/strip fragments	6
sheet metal fragments (ferrous and nonferrous)	8
fuse	1
insulated wire fragment	1
iron bar	1
iron bracket	1
iron pipe	1
iron stake (pointed at one end)	1
iron washer	1
large long bolts, threaded at one end	3
bolts	10
nuts	5
screws	4
possible flashlight part	1

unidentified ferrous parts and fragments	6
unidentified nonferrous fragment	1
wire fragments	11
wire staples	3
heavy, curved iron bar with drilled hole	1
cast iron machine part with curved edge	1
drill bit	1
circular whetstone fragment	1
alligator clamps	2
brass lead with fragment of insulated wire	1
brass pin (small; possibly a shear pin)	1
brass or copper rivet	1
eyed needle with threaded end	1
iron log hook chain	1
iron thrust bearing	1
large iron gear fragments	4
metal container with trace of painted label	1
iron strap spring	1
iron water pipe segment	1
metal bucket bale	1
metal pipe elbow	1

Household Artifacts

The Household category contains domestic artifacts such as ceramics, glass tableware and containers and some metal. Since the mill did not have a residential component as such (although long work shifts could have meant that some facility for taking work breaks was made available), the presence of domestic artifacts may be due to workers bringing or being provided with food transported in serving or storage vessels. Excluded from this category was obviously modern beverage bottle glass that is classified under the Recreation category.

Ceramics numbered 44 specimens. Ware types include pearlware, whiteware,



Figure 22. Hardware/Industrial Artifacts.

porcelain, unidentified refined earthenware, yellowware and stoneware (Figure 23). Seven pearlware sherds include an undecorated specimen, one with a trace of blue decoration, and five handpainted sherds with a gold and green floral pattern and brown banding. Vessel forms were not identifiable. The pearlware sherds were from vessels manufactured prior to 1830 and represent the earliest ceramics recovered from the site. Thirteen whiteware sherds include eleven undecorated specimens, one with a flow blue transferprinted pattern, and one that may be handpainted in blue. One sherd is from a plate; another very small sherd exhibits a partial backstamp that was too fragmentary to identify. Whiteware was manufactured after 1830 and is still made today. Five undecorated refined earthenware sherds could not be identified to a specific ware type. One of these sherds was a blue edged rim spall. An undecorated porcelain rim and small handle were also recovered. These sherds are probably from cups.

Yellowware included three spalls (one with brown banding), and a brown/orange banded sherd. The ware type was probably made from the 1840's or 1850's onward. Stoneware included thirteen sherds with a variety of surface treatments. Albany slip glaze, Bristol glaze, and salt glazes are all represented. An Albany slip and Bristol glazed large crock with a cupped lug is represented by five sherds. This glaze combination dates to the late nineteenth and early twentieth centuries. Two sherds are completely glazed with Albany slip. Two sherds have a brown salt glazed exterior and may represent a bottle or jug form. A buff salt glazed sherd and one with Albany slip and salt glazed combination were also recovered. These stoneware sherds could date as early as the 1840's or 1850's.

Glass artifacts accounted for 170 specimens, most of them nondiagnostic. Nondiagnostic glass accounted for 106 clear, 10 aquamarine, one milk, 19 amber and six green fragments. More diagnostic glass included an amber glass bottle rim with a hand applied lip that predates the invention of the automatic bottle making machine in 1905, a light green beverage bottle base embossed "-OO-/REG" (possibly a registered mark, but too fragmentary to identify), three clear glass tumbler rims and a clear pressed glass fragment with a diamond motif. Two light green fragments are probably from a scroll flask, and eleven clear glass fragments represent at least two machine made screw top jars. A zinc canning jar lid with a milk glass liner was also recovered.

A cast iron pot or pan rim was also classified under the Household category as was three animal bones and a persimmon seed.

Military

Artifacts present in the mill deposits as a result of military activities include a blank shell casing, a bullet, a gas canister and a hand grenade pin.

Natural/Prehistoric

A chert biface, eight chert flakes, 124 snail shells and a mussel shell fragment were



Figure 23. Ceramics.

classified as natural or prehistoric. The chert artifacts are of prehistoric Native American manufacture. Their cultural affiliation could not be determined. The mussel shell is probably a natural inclusion deposited by floodwaters. The snail shells also can be considered a natural inclusion.

Personal

Three buttons were classified as personal artifacts. They include a two-holed shell button, a four-holed shell button, and a brass button with an eyelet. They all probably were made during the nineteenth century, and represent accidental loss.

Recreation

This category was created for artifacts that are modern in date and represent activities such as picnicking and parties that involved the consumption of alcohol. Artifacts include eleven crown bottle caps or their liners, 167 clear glass fragments, six amber beer bottle fragments, four cobalt glass fragments, five light green glass fragments and a bottle opener.

Transportation

This category contains seven fragments of a red glass reflector taillight from a vehicle.

Unidentified

Twenty-one unidentified items were placed in this category. These include a scrap of sheet lead, a fragment of asphalt, tar paper or similar material, a threaded brass ring or cap fragment, two heavily corroded iron fragments, one thick flat glass fragment, one triangular flat metal fragment, two leather pieces, three fragments of a very corroded metal container, one fragment of what appears to be mica, four pieces of what may be very weathered rubber, a small rod-shaped item that might be a fossil, and two thin pieces of sheet metal.

CONCLUSIONS OF THE TESTING PROGRAM

Test excavations at the Garnettsville Mill revealed a rather complex stratigraphy that reflects both natural and cultural depositional factors. The mill site is located on a point bar of Otter Creek. The natural point bar sequence includes a dense clay with some gravels at the lowest depth of the archaeological excavations, and an overlying gravelly deposit. There may have been additional stratigraphic strata that once overlaid the gravelly subsoil, but cultural activities over the past 190 years have obscured recognition of other natural point bar deposits. Construction of the mill probably involved the excavation of some of the natural point bar deposits to create a semisubterranean level and to build a stone masonry foundation. The buildup of secondarily deposited gravelly fill on the south side of the

building suggests that the initial excavation to build the foundation dumped the backfill into this area.

Subsequent fill episodes on the south side of the building may also have taken place at various times through the mill's uselife. Fill episodes on the north lower side of the building foundation are less obvious; if they occurred, they may have been scoured away by post-abandonment flooding; however, Unit 5 on the west side of the building did exhibit evidence of an episode of gravel deposition that probably was done to create a stable surface for parking, unloading and other activities that require some kind of vehicle. This gravel layer was stratigraphically between artifact bearing levels, indicating that it was laid down fairly late in the mill's history. The presence of wire nails both above and below the layer of gravel is suggestive of an early twentieth century date for this gravel layer.

Informant interviews indicate that the mill building continued to be used for milling until the 1920's or 1930's, then served as a place of entertainment until the federal acquisition in the early 1940's (Kempf 1996). The stratigraphic sequence of Unit 1 indicates that flooding episodes while the building was still standing left an accumulation of silt in the lowest level of the structure. The building certainly would have been flooded during the famous 1937 flood and probably was periodically inundated by floods of less magnitude.

After federal acquisition, the building was demolished and the region in and around Garnettsville was converted to tank maneuvering use. This activity resulted in the removal of surface vegetation, massive erosion and increased runoff and flooding. The hydrologic system of the Otter Creek drainage in this area probably changed dramatically, at least for awhile. Flooding regimes also would have changed, and the stratigraphic strata at Garnettsville Mill reflect these post-abandonment factors.

Artifacts from the mill reflect its largely industrial character. Relatively low densities of artifacts that are heavily weighted toward Architectural and Hardware/Industrial classes characterize the assemblage. No evidence of the wooden elements of the mill machinery remain, but metal parts were recovered, including large gear fragments, alligator clamps from conveyor belts, a thrust bearing that was probably part of the power train, a spring or crank arm that might have been associated with the saw mill, and other parts that are more difficult to identify. Miscellaneous items such as a bucket bale, a log hook chain, a whetstone fragment, a drill bit, and various fasteners and sheet metal fragments represent ancillary artifacts that would have been used in and around the mill. Generally, Ball's prediction that mill sites were stripped of their operational machinery after they discontinued their milling function appears to be supported by the Garnettsville Mill assemblage.

Architectural artifacts relate to the building itself. Window glass thicknesses indicate that windows may have been added to the building several decades after it was first constructed, with periodic replacement well into the twentieth century. An extant photograph of the front of the building shows only one window and another opening that might also have been glassed; it is possible that the building never had very many windows. The presence

of both cut and wire nails are suggestive of fairly regular refurbishing and repair of the structure through the nineteenth and early twentieth centuries.

The small quantities of Personal and Household artifacts reflect accidental loss of minor clothing elements such as buttons and breakage of serving vessels that were possibly brought to the site for use during meals taken while at work.

Several questions were raised as a result of the testing program. The function of the stone masonry wall documented in the cutbank of the tributary stream was not determined. The course of the mill race that brought the water to the wheel was not well documented. Additional excavation would be necessary to more completely document the extant building foundation and identify features inside and outside. Another possible outcome of additional excavation would be to determine if the grist and saw functions of the mill were segregated.

The test excavations at Garnettsville Mill, although limited to nine square meters, some shovel probes and surface mapping, yielded sufficient evidence to demonstrate that the site is fairly well preserved, and has the potential to yield additional significant information about its floor plan, and site layout relative to its locality on a tributary stream to Otter Creek. Additional archaeological research could also yield important information concerning the location of the dam or dams that powered this mill. Based on the research conducted to date, the Garnettsville Mill Site is considered to be eligible for the National Register of Historic Places.

MAPPING PROGRAM FOR THE TOWN OF GARNETTSVILLE

A final outcome of the field investigations in Garnettsville was to complete the mapping of the town and produce a map that overlaid the original town plat onto the map of identified cultural features. The map generated by Webb and Brockington (1987: Figure 7) was used as a base; it focused on the north side of Main Street. Limited survey efforts by the University of Kentucky field crew were directed toward identifying additional cultural features on the south side of Main Street; however, this effort was not particularly effective because of the vegetational cover. Arrangements to burn off or bushhog the vegetation to improve the ground visibility did not work out. However, a few features were mapped and the map was extended south to the modern power line that parallels Main Street. The 1919 town plat was then overlain onto the survey map by identifying points common to both maps and adjusting the map scales. Figure 24 illustrates the final map. The names listed on the 1919 map are reproduced with the same spellings as used on the original. However, some of the names are incorrectly spelled and/or did not include full names. Specifically, Marcum was the preferred spelling rather than Markham. W.R. Ferbis was actually William Paschal Forbis. C.H. Lane was Casper H. Lane. Woolridge was the preferred spelling rather than Wolridge. In addition to the 1919 plat, another plat was drawn at the time the town was acquired by the federal government in the early 1940's. Ownership changed considerably in the intervening years. Table 3 lists the owners and the acquisition numbers assigned when the land was transferred to the federal government. Correlations with owners of

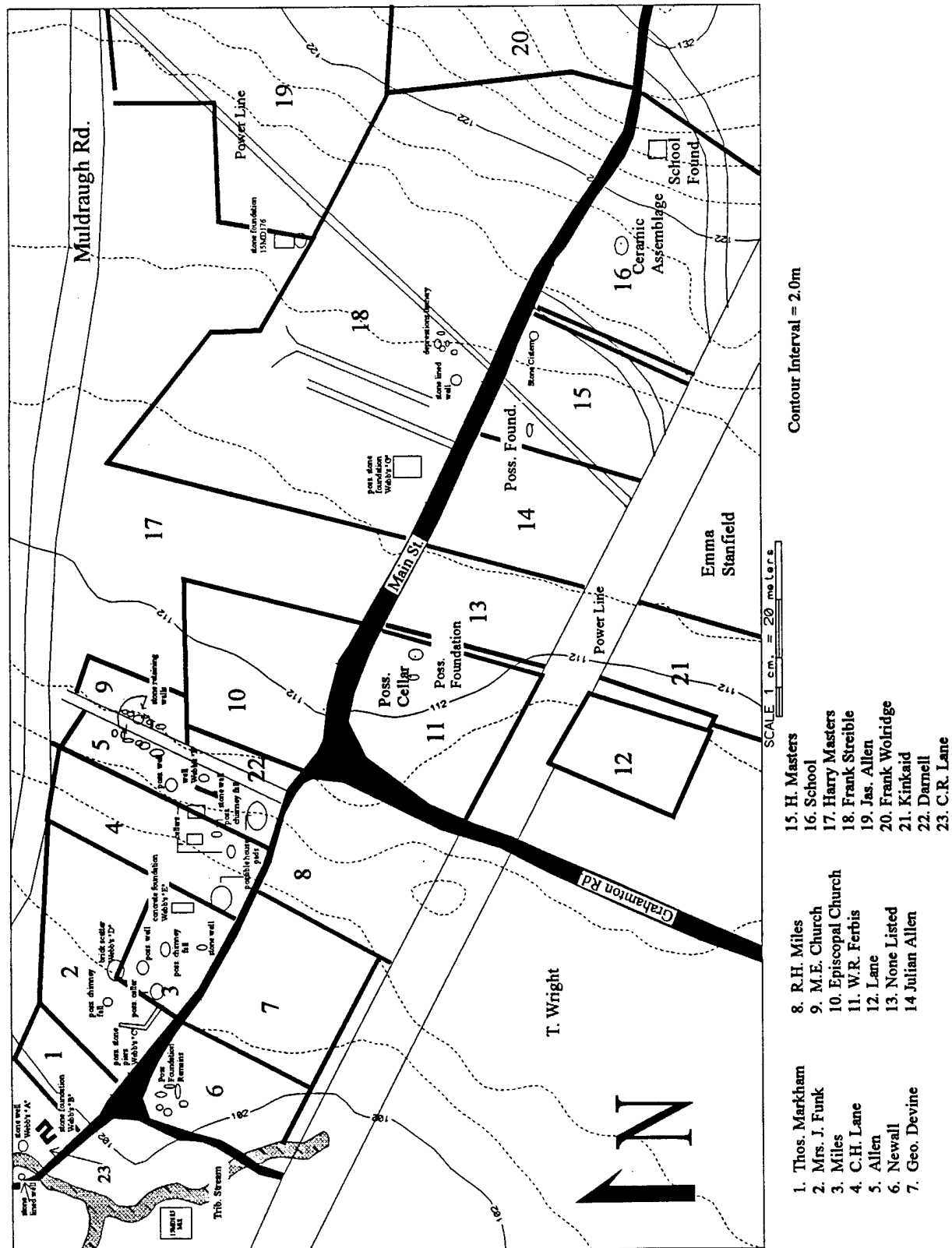


Figure 24. Map of Garnettsville.

Garnettsville property in 1919 are also included. The surnames used for the 1919 owners utilize the spelling used most commonly for that name.

Table 3. Correlations of Landowners in Garnettsville Between 1919 and 1940.

Lot acquisition nos.	Owners at time of acquisition	1919 Owners
A2	Sam B. Aiken et ux.	Frank Woolridge
A5	Frank R. Allen heirs	Kinkaid
A10	Margaret Allen heirs	Julian Allen
A31	Charles Bertlecamp et ux.	W.P. Forbis
A61	Guy Chapman et ux.	Frank Streible
A67	Alice Chenault	Thomas Marcum
A93	Pearl Downs	Emma Stanfield
A121,122	Calvin Hatfield et ux.	George Devine
A137	Hubert D. Higbee et ux.	Episcopal Church
A150	Mamie Keith et. vir.	H. Masters
A167	Eva LeMasters et vir.	Harry Masters
A168,169	William LeMasters et ux.	Methodist Episcopal Church
A184	Alice Marcum et vir.	Mrs. J. Funk
A185	Orville Marcum et ux.	C.R. Lane
A197	Meade Co. Board of Education	Meade Co. Board of Education
A256	Laura Richardson	Darnell
A266	Arthur Seelye et ux.	Allen
A317	George T. & Annie E. Umenstetter	R.H. Miles
A337	I.M. Wilkerson	Miles
A339,340	Gerald Wilson et ux.	Methodist Episcopal Church

A349	Ivan Wright et ux.	T. Wright?
A350	B.E. Yates et ux.	C.H. Lane

RECOMMENDATIONS

Documentary research on the nineteenth and early twentieth century milling industry in the area now occupied by the Fort Knox military reservation identified numerous mill sites that may still exist as archaeological sites. Archaeological research gathered preliminary information on one previously documented mill in the former town of Garnettsville. The milling industry flourished for several decades in the Fort Knox area then declined as merchant milling in larger urban areas, combined with improvements in transportation systems, grew to dominate the regional market. Grist and saw mills were the most common types of milling sites but other products such as textiles and gunpowder also were produced. The major milling streams in Fort Knox were Mill Creek, Otter Creek, and, to a lesser extent, Abraham's Run, the Salt River and the Rolling Fork. Mills were also documented on some minor tributaries of these waterways and others. Most of the mills in the fort Knox area were seasonal in operation, due to demand and available water. A notable exception is the Grahamton Mill which was a major textile producer that employed dozens of people over a period of more than one hundred years.

Although documentary research successfully identified the former existence of mill sites on Fort Knox in addition to the ones previously documented in O'Malley et al. (1980), Holmberg (1991) and O'Malley (1996), their locations were not always pinpointed, partly because of time constraints imposed by the available funding and partly due to deficiencies in the deed records. Additional documentary research is recommended to fill in some of the informational gaps. Systematic reconstruction of chains of title for all the land along the major mill streams, beginning with the military acquisition and working back through time, is considered the most efficient method to identify the various owners of the known mills and reveal additional mills that may not have been documented by the research presented in this report. In some cases, the deed research will have to include properties outside the installation in order to find landmarks which appear on modern maps. This research should also include genealogical data to uncover unrecorded transactions between related individuals through gift, dower, or inheritance, and instances where a woman inherited as a widow of a mill owner and the property later transferred under her husband's name. A search of the 1900, and 1910 census records may also prove useful in locating additional mill owners or employees. Review of circuit court case files could also gather useful information on various mill sites. With this additional information in hand, field location of the sites would be greatly enhanced. It is possible, however, that some mills will not have translated into recognizable archaeological sites, especially portable saw mills.

Fieldwork conducted at the Garnettsville Mill revealed well preserved foundations and intact cultural deposits. It also gathered a sample of mill-related artifacts. On the basis of the fieldwork, the site is considered to be eligible for the National Register of Historic Places

on the basis of its good preservation and its good potential for yielding data on site plan, architecture and site modifications necessary to create an operational facility. Should the site be the subject of additional fieldwork in the future, emphasis should be placed on exposing the foundations more fully, locating the mill race and identifying, if possible, the dam(s) locations.

Additional documentary and archaeological research on the Garnettsville Mill as well as other identified mill sites on Fort Knox could result in a thematic nomination of eligible mill sites to the National Register of Historic Places. However, field verification of as yet unlocated sites needs to be accomplished prior to a nomination being formulated.

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Appendix A

Mills in Bullitt, Hardin and Meade Counties Listed in Federal Manufacturing Censuses

1820

Bullitt County

Simmons, Samuel (located on Cedar Creek, south of Salt River)

manufacturer of flour
2500 bu wheat @ \$1875
2 men employed
one pair of stones; one "alivator" and one "bolt" in the operation
\$4800 capital investment
\$150 annual wages
\$100 contingent expenses
500 barrels made @\$5/barrel
Establishment in good order but demand for flour down from one or two years ago

Smith, P. (possibly Peter or Philip)

manufacturer of flour
2500 bu wheat @\$1875
one man employed
one pair stones, "alivators" & "bolt"
\$3800 capital investment
\$50 wages
\$50 contingent expenses
500 barrels of flour made for \$3000 value
Dull sales because of low prices

Hamelton, E.H.

2500 bu wheat @\$1875
2 men employed
1 pair stones and 2 bolts for merchants' work used
\$4000 capital investment
\$300 wages
\$150 contingent expenses
500 barrels @\$5/barrel=\$2500
Establishment not in fulltime operation because of insufficient water and slow demand

Harris, N. (Nathan)

5000 bu wheat @\$3750
2 men employed
one pair stones for merchants' work, 2 bolts and alivators all used
\$7750 capital investment
\$200 wages
\$100 contingency expenses
1000 barrels @\$5/barrel=\$5000
Good order but dull sales

NOTE: This mill was located on Crooked Creek (formerly referred to as Cedar Creek) and was originally built in 1809-1810 by Michael Troutman, whose son and heir, Philip, sold to Nathan Harris in 1818. Harris sold a 100-acre mill tract to Wilfred Lee in 1826. Lee operated the mill until his death in 1851 at which time his lands were divided between his heirs. His son, Charles, received the mill tract and immediately sold it to Charles Lutes (or Lutz). At Charles Lutes' death in 1863, his son, Asa, received the mill site and 17.5 acres around it. Asa Lutes sold the same property to William T. Lutz in 1878. The mill probably was out of operation by this time. In 1893, William T. Lutz and his wife, then living in Nelson county, sold the property to B.J. Blandford and J. W. Hardy.

Hardin and Meade Counties

This manufacturing census lists only stills and tanyards for Hardin and Meade counties.

1850

Bullitt County

Hines (spelling uncertain) & Carson

water powered merchant mill, 2 buhr stones
Capital investment of \$6000
2 men @ \$23/month (total for both)
10,000 bu wheat @ \$2500 (or \$2300) yielding 500 bls flour worth \$2300

water powered sawmill, 1 saw (type unspecified)
Capital investment of \$4000
3 men @ \$48/month
300 logs @ \$400 yielding 250,000 ft lumber worth \$1200

George Z. Miller (middle initial is S in population census)

8 hp steam engine powered grist mill
Capital investment of \$30,000

8 men @ \$80/month
75,000 bu wheat @ \$56,000 yielding 15,000 bls flour worth \$65,000

Charles Foster

water powered grist mill
Capital investment of \$300
2 men @ \$24/month
4000 bu corn @ \$4000 yielding 4000 bu meal @ \$5500

Joel Balee (possibly Bales)

steam powered merchant mill
Capital investment of \$14,000
5 men @ \$75/month
40,000 bu wheat @ \$26,000 yielding 8000 bls @ \$33,000

John T. Harris

steam powered merchant mill
Capital investment of \$4000
2 men @ \$32/month
10,000 bu wheat @ \$8000 yielding 2000 bls flour worth \$8500

Hardin County

Southern District 2

H. A. Craig

merchant milling; water powered
Capital investment of \$15,000
5 men employed @ average monthly wage of \$40 (possibly for 9 months of the year, but this is struck out)
27,375 bu corn and wheat @ \$17,190 (?) yielding (illegible) bls flour and (illegible) bu meal with combined worth of \$29,837 [CHECK these figures]

NOTE: Henry A. Craig is listed as a miller in the 1850 Population Census with a real estate value of \$5000.

Richard Percefull

merchant milling; water powered

Capital investment of \$16,000
2 men employed @ average monthly wage of \$30
30,000 bu corn, wheat, rye etc. @ \$20,000 yielding (illegible) bls flour and 7500 (?) bu meal with combined worth of \$33,750

NOTE: Richard Percefull is listed as a miller/farmer in the 1850 Population Census with a real estate value of \$1500.

Daniel L. Richardson

water powered
Capital investment of \$12,000
1 man employed @ average monthly wage of \$20
8000 bu corn A \$3000 yielding 8000 bu meal worth \$3000

NOTE: Daniel L. Richardson is listed as a miller/farmer in the 1850 Population Census with a real estate value of \$2000.

Thomas Fairleigh

water powered
Capital investment of \$500
2 men employed @ average monthly wage of \$16
10,000 bu corn, wheat, etc. @ \$5000 yielding 2000 bls flour worth \$4000 and 5000 bu meal worth \$2500

Jackson Dickey

water powered
Capital investment of \$1000
2 men employed @ average monthly wage of \$30
1000 bu corn @ \$1000 yielding 10,000 bu meal worth \$4000 (clearly an error in amounts of meal; should be a yield of 1000 bu)

Bland H. Williams

water powered
Capital investment of \$1500
3 men employed @ average monthly wage of \$45
10,000 bu corn @ \$8000 yielding 10,000 bu meal worth \$2500
10,000 bu wheat @ \$6000 yielding 2000 bls flour worth \$8000

NOTE: Bland H. Williamson (note different spelling) is listed as a miller in the 1850 Population Census with a real estate value of \$2500.

Martin Hardin

water powered

Capital investment of \$5000

3 men employed @ average monthly wage of \$45

10,000 bu wheat @ \$8000 yielding 2000 bls flour worth \$(illegible)

10,000 bu corn @ \$5000 yielding 10,000 bu meal worth \$3000

John Vanmetre

water powered

Capital investment of \$1000

2 men employed @ average monthly wage of \$30

4000 bu corn @ \$1200 yielding 4000 bu meal worth \$1200

Hiram P. Sherrod

water powered milling, distilling and blacksmithing

Capital investment of \$1000

3 men employed @ average monthly wage of \$45

2000 bu corn, 1300 gal whiskey, 200 ploughs, iron (illegible) at combined worth of \$1000

NOTE: Hiram P. Atwood is listed as a miller/mechanic in the 1850 Population Census with a real estate value of \$1800. The manufacturing census may have incorrectly noted his surname.

William Lain

water powered

Capital investment of \$1000

2 men employed @ average monthly wage of \$20

3000 bu wheat and 3000 bu corn for combined value of \$3300, yielding 600 bls flour and 3000 bu meal worth \$3300

District 1

D. Postan (possibly should be Temple Posten)

steam powered (grist and saw)

Capital investment of \$4000 for grist mill

Capital investment of \$500 for saw mill

5 men employed at grist mill @ average monthly wage of \$65

1 man employed at saw mill @ average monthly wage of \$13

3500 bu wheat @ \$2500 yielding 700 bls flour worth \$3500
200 cords wood @ \$500 and saw logs @ \$200 yielding lumber worth \$600

1850

Meade County

Pusey & Adams

water powered sawmill
Capital investment of \$1000
300 logs @ \$300 yielding 15,000 ft worth \$1500
3 men @ \$45/month

Collins Fitch

water powered sawmill
Capital investment of \$2000
400 logs @ \$600 yielding 300,000 ft worth \$3000
2 men @ \$30/month

NOTE: Collins Fitch's mill was probably on Otter Creek.

Bentley, Alexander & Co.

steam and water powered flour mills
Capital investment of \$20,000
10 men @ \$200/month
50,000 bu wheat @ \$37,500 yielding 111,100 bls flour worth \$472,100

NOTE: The frequency of flour barrels and their value appear to be incorrect in the census.

1860

Bullitt County

(very hard to read)

John Crumbaker (Cumabacker in other records)

1000 bu corn
200 bu wheat all valued @\$835
135 logs
water powered mill
1 man employed @\$20/month

annual product: 1000 bu wheat flour
3700 (?) planks
Value illegible

W. B. McBride

Milling \$3000 capital investment
Grist mill \$500 capital investment
Steam powered mill
800 logs @\$1600
1000 bu corn @\$500
Value \$4680 of planks
6 men @\$145/month for sawmill, 32,000 ft. of planks
1 man @\$25/month for grist, 1200 bu meal @\$720 value

A.W. Swearingen

\$5400 capital investment
15,000 bu wheat
1000 bu corn all valued @\$16,500
800 T wood

3000 lbs flour both valued @\$22,020
1200 lbs meal or \$22,420

steam powered mill
3 men @\$135/month

NOTE: Swearingen is listed in the 1860 Population Census as being in the Mt. Washington district.

J. [John] T. Harris

\$6000 capital investment
next line illegible, may be another \$2000
3000 bu wheat @\$25,000
corn @\$300
6000 lbs flour @\$27,500
1000 logs @\$1500 (?)
400 ft (?) @\$200
140,000 ft. plank @\$2500
steam powered mill
2 men on grist @\$40/month
1 man on sawmill @\$20/month

NOTE: Harris is listed in the 1860 Population Census as being in the Mt. Washington district. He was also listed in the 1850 Census along with James B. and Lewis Gentry who were also millers.

D. & J. (or I. for Isaac N.) Parrish

\$1300 capital investment
300 logs @\$1000
100 cords wood @\$250
200,000 feet plank @\$2500
other ?? @\$300
other articles @\$240
3 men @\$60/mon.

NOTE: D. Parrish is listed in the 1860 Population Census as being in District 2, Mt. Washington P.O.

1860

Hardin County

Frederick Raubold, Wortham & Terry

water powered
Capital investment of \$10,000
5 men @ \$100/month
31,000 bu wheat @ \$30,000 yielding 6230 bls flour worth \$34,240
13,600 bu corn @ \$1800 yielding 13,600 bu meal worth \$8180 (?)
1560 bu rye @ \$760 yielding 1560 bu rye meal worth \$160

Wortham & Terry

carding and saw mill
Capital investment of \$3000 in carding mill and \$3000 in saw mill
1 man employed @ \$20/month
13,000 lbs wool @ \$4600 yielding 13,000 lbs reels worth \$5100
380 logs @ \$700 (?) yielding 120,000 ft lumber worth \$1200

NOTE: The historic resources inventory form for White Mills (Hd-171) indicates that, in 1855, Dan Wortham rebuilt a mill that had washed away in 1853 or 1854. This mill was later owned by Joseph D. Richardson who replaced the wooden dam built by Wortham with a stone one that was one foot higher and supplied more power. This mill was powered by the waters of Nolin River. Daniel Wortham is listed as a miller in the 1860 Population Census with a real estate value of \$3500 and a personal estate value of \$3000. He was living in the Stephensburg district at the time of census. White Mills is just south of

Stephensburg. The mill was torn down in 1949.

Jno. Milburn (John Milbourn in other records)

water powered grist and saw mill

Capital investment of \$800

1 man employed @ \$40/month

600 bu corn @ \$300 yielding meal worth \$300

400 oak logs @ \$200 yielding rough boards worth \$800

NOTE: John Milbourn was listed as a farmer in the both the 1850 and 1870 Censuses, suggesting that his milling was a seasonal occupation. He was listed in the Meeting Creek Precinct in 1870 and in the Southern District #2 in 1850.

1860

Meade County

W. G. & O. M. Anderson (located at Grahamton)

Capital investment of \$500

water powered mill with 1 run of stones

4000 bu wheat @ \$3000 made 800 lbs flour worth \$4400

2 men employed @ \$50/month

NOTE: The Andersons were involved, along with various other partners, in the development of the Grahamton mill complex which included not only a grist mill but also a large textile mill. The earliest evidence of an intent to build a mill in the Grahamton area was in 1813 when David Brandenburg requested permission to build a mill on a 300 acre tract on Otter Creek. This property was sold to Robert Graham and Co. in 1835 who relocated a cotton and wool mill from Louisville. Graham's partners included James Anderson, Samuel P. Sterrett, John White, and William Graham. Various of these partners sold their interests and the company reformed as Graham, Anderson & Co. and, after additional transfers, as W.G. & O.M. Anderson Co. in 1848. After O.M. Anderson's death in 1857, the firm was renamed W.G. Anderson & Co. W.G. Anderson lived in Lexington.

J. (possibly I.) W. Overton

Sawed lumber

Capital investment of \$2000

Water powered mill with 1 saw

350 logs @ \$700 made 250,000 ft. of sawed boards worth \$2500

2 men employed @ \$38/month

NOTE: This individual is probably Isaac W. Overton who was listed in Hardin County in 1850, but had moved to Meade County by 1860. J.F. (note difference in middle initial) and I.H. Overton are both listed as millers in the Garnettsville District in the 1860 Population Census. J.F. Overton is probably James who may have been Isaac Overton's son. James Overton was a schoolteacher in Meade County in 1850. In 1860, J.F. Overton had \$4000 in real estate and \$200 in personal estate. I.H. Overton is definitely the same man as Isaac W. Overton; in 1860, he had \$7000 in real estate and \$2460 in personal estate. The site of one of the Overton mills is located in Otter Creek Park; however, by 1860, Isaac Overton and his wife, Nancy Garrett Overton, had sold the mill to Samuel P. Sterrett (in 1842). The Overtons may have begun another mill elsewhere or were working at a mill in which they had a financial interest in 1860.

Collins Fitch

Sawed lumber

Capital investment of \$2000

Water powered mill

400 logs @ \$1000 made 300,000 ft. sawed boards worth \$3000

3 men employed @ \$45/month

NOTE: Collins Fitch is listed as a miller/farmer in the Brandenburg district in the 1870 Population Census with \$8000 in real estate and \$4860 in personal estate. Also listed as a miller in the same district and census is William T. Fitch who reported \$200 in personal estate.

S. P. Sterrett

Capital investment of \$10,000

water powered mill for wheat

9000 bu wheat @ \$8950 made 2000 (barrels?) flour worth \$12,000

steam powered mill for corn

3000 bu corn @ \$1500

horse drawn mill for rye and buckwheat

500 bu rye/buckwheat @ \$325

Combined total of corn, rye and buckwheat was \$2000 worth of meal

NOTE: Samuel P. Sterrett is listed as a miller in the Garnettsville district in the 1870 Population Census. His real estate value is \$15,000 and his personal estate was worth \$4212. Also listed in the same district and census is Calvin S. Sterrett with \$1775 in personal estate. In 1860, Samuel and Calvin Sterret (father and son) were operating the former Overton mill, now located as an archaeological site in Otter Creek Park.

1870

Bullitt County

George W. Waller

water powered grist & flouring mill
\$2350 in capital investment
6 hp, 2 stories
2 men more than 16 years old employed @ annual total wages of \$300; 6 months employed
all grains milled
7400 bu (?) @\$5250 value
Value after flouring = \$5875

Atcher & Mobley

steam powered grist & flouring mill
one engine (18 hp); 2 runs of stones
\$2000 capital investment (hard to read, possibly \$3000)
2 men more than 16 years old employed for 6 months @\$100 annually
wheat 600 bu @\$600 yields 820 barrels flour @\$720
corn 600 bu @\$500 yields 650 bu meal @\$650
wood 50 cords @\$100 yields boards etc. @\$200

NOTE: Gabriel Mobley (spelled Mobly in his marriage record) married Margaret E. Atcher, daughter of G.L. Atcher in 1866. Gabriel had previously married to Margaret's sister, Cynthia Ann, in 1863, who apparently died (Pamela Schenian 1996, personal communication). This mill may have been a partnership between Mobley and his father-in-law.

J.A. Caldwell & Co. Sawmill

\$5000 capital investment
1 30 hp steam engine powered one circular saw
2 men more than 16 years of age on logs
2350 logs yielding 400,000 ft of lumber worth \$8000
14 men more than 16 years of age on cutting
100 cords of wood worth \$100
\$4500 annual wages for 5 months work

Hays & Co. Sawmill

\$2400 capital expenses
1 30 hp steam engine powering 1 circular saw
2 men @\$800 wages for 4 months

700 logs @\$950 yields 125,000 ft. lumber @\$2500
50 cords wood @\$50

NOTE: This mill was probably owned by W. G. Hays whose mill was mentioned in Bullitt County Order Book K. On May 18, 1874, Dr. T. R. Horrell asked the county court to open or improve a road between his ferry and the Hays Mill. Horrell's Ferry was on the Fort Knox military reservation downstream from the Wooldridge Ferry Bridge on the Rolling Fork.

J. San? Lan? Sir? Sawmill (written over so can't read)

\$2000 capital investment
1 20 hp steam engine powering 1 circular saw
4 men for 10 months @\$3000 wages
2500 logs @\$3000 yields 500,000 ft lumber @\$8000
150 cords wood @\$175

NOTE: This may be the mill of James Larue.

R.M. Harshfield & Co. (located in Pitts Point)

Planing mill
\$6000 capital investment
1 12 hp steam engine
2 men more than 16 years of age @\$250 for 5 months
lumber 70?,000 ft @\$1050
200 cords wood @\$300
Mill produces sash 150 @\$450
 doors 50 @\$225
 flooring 30,000 ft. @\$1350
 siding 10,000 ft. @\$60

Grist & Flouring Mill
\$4000 capital investment
1 20 hp steam engine
2 runs of stones, daily capacity 225 bu
\$250 wages for 5 months
2920 bu wheat @\$2600 yields 565 barrels flour @\$3520
4460 bu corn @\$4430 yields 4816 bu meal @\$4816
bran, etc. @\$500

NOTE: Harshfield purchased Lot 5 in Pitts Point from John W. Miller in 1863; the deed stated that a flouring mill was in place on the lot at the time of the conveyance.

Barnes & Bro. Grist & Flouring Mill

\$1500 capital investment

1 steam engine (12 and 25 hp)

2 runs of stones

225 bu daily capacity

2 men more than 16 years of age @\$200 for 9 months

wheat 2700 bu @\$2700 yields 500 barrels flour @\$3000

corn 2500 bu @\$2160 yield 2916 bu meal @\$2916

wood 150 cords @\$300

bran, shorts, etc. @\$500

Sawmill

\$750 capital investment

13 hp engine powering 1 saw

\$25 in wages for 2 months

500 logs @\$1250 yields 150,000 ft lumber @\$2400

11 (?) cords wood @\$150

John Crumbacher/Cumabacker

Grist mill

\$4000 capital investment

1 13 hp steam engine

200 bu daily capacity

3 men more than 16 years of age @\$500 for 5 months

8000 bu corn @\$6000 yields 8500 bu meal \$8500

150 cords wood @\$175

Saw mill

\$3000 capital investment

1 12 hp steam powered saw

3 men more than 16 years of age @\$500 for 8 months

900 logs @\$1100 yields 30,000 ft lumber @\$3000

100 (?) cords wood @\$120 (?)

Charles Bell

Grist & Flouring Mill

Total capital investment=\$6000

Saw mill

1 25 hp steam engine: 12 hp on saw mill and 13 hp on grist mill

200 bu daily capacity

1 man more than 16 years of age @\$300 for 3 months

all grain 1200 bu @\$1200 yields 240 barrels flour and 12 or 13 barrels of feeds @ combined value of \$1840

custom milling all grain 2100 bu? @\$1800
value after milling = \$2540
100 logs @\$200 yields 28,000 ft lumber @\$500
2 slabs (?) wood @\$40

John Bridges

Saw mill
\$3000 capital investment
1 32 hp steam engine
2 men more than 16 years of age @\$300 for 3 months
200 logs @\$600 yields 120,000 ft lumber @\$1320
5 cords of wood @\$150

Samuel L. Bridges

grist mill
\$1000 capital investment
water powered, wheel diameter 14 ft.
1 run of stones
80 bu daily capacity
1 man for 3 months
1000 bu corn @\$1000 yields 1080 bu meal @\$1350

Barrel & Martin's Sawmill

\$1500 capital investment
1 12 hp steam engine powering 1 saw
2 men more than 16 years of age @\$2000 for 9 months
2340 logs @\$4680 yields 702,000 ft lumber @ \$12,636
Wood 100 cords @\$100

NOTE: Marriage records compiled by Pamela Schenian, Fort Knox archaeologist, revealed that Christian H. and Joseph A. Barrell/Barrall, who were brothers, married, respectively, Rebecca Jane and Elvira Martin, daughters of Thomas J. Martin. Christian, who was the older of the brothers by 18 years, married in 1848 while Joseph married in 1865. This mill was probably a partnership between the brothers and their in-laws.

1870

Hardin County

Atcher Precinct

Peter O. Sterrett

water powered grist (10 hp) and saw mill (8 hp)
Capital investment of \$500 in grist and \$300 in saw mill
1 run of stones, 1 saw
1 man employed at grist mill for 6 months
360 bu all grain @ \$216 yielding 340 bu corn meal and feed worth \$315
600 bu custom grind all grain @ \$360 yielding value of \$675 after milling

NOTE: This entry is very faint on microfilm. The name is difficult to read and may be Stovall rather than Sterrett. The only miller found in Atcher Precinct in the 1870 Population Census was a man named John O. Stovall who was listed under the Red Hill post office jurisdiction. He had a real estate value of \$5000 and a personal estate value of \$1000. Red Hill was a small community a few miles northwest of Radcliff and near the Meade county line. It is still shown on the Vine Grove topographic quadrangle map as part of Radcliff. John O. Stovall once owned the site documented by the 1979 Fort Knox archaeological survey as 15HD253.

Colesburg District

John G. Marshall

steam powered 30 hp engine; saw and grist mill
Capital investment of \$3000
3 men employed at grist mill for 10 month @ \$175
2 men employed at saw mill for 10 months @ \$125
900 logs @ \$900 yielding 180,000 ft lumber worth \$2700
1600 bu corn @ \$800 yielding 2000 bumeal @ \$2000

NOTE: A John S. Marshall is listed as a miller in the 1870 Population Census with a real estate value of \$3000 and a personal estate value of \$500. He was living in the Colesburg Precinct at the time of census. His mill could have been on Cedar Creek.

Pius Booth

20 hp steam engine saw mill
Capital investment of \$3500
4 men employed for 6 months @ \$600
550 logs @ \$1300 yielding 137,500 ft worth \$2000

Haslem & Allen Saw Mill

35 hp steam engine powered; 1 saw
Capital investment of \$1100

4 men employed for 8 months @ \$1000
1700 logs @ \$3500 yielding 520,000 ft worth \$8850

In Elizabethtown

NOTE: James Haslem, a miller, and Oscar A. Haslem, a sawmill worker, are both listed in Elizabethtown precinct in the 1870 Population Census. Alpheus Allen is also listed in this census as a miller in Colesburg Precinct. The Haslems are not listed as having any real estate although James Haslem had a personal estate value of \$150. Alpheus Allen is listed with a real estate value of \$1000.

Anthony Bledsoe

20 hp steam engine
Capital investment of \$1000
operates 4 months out of year
logs @ \$500 yielding 200,000 ft worth \$2000

NOTE: Anthony Bledsoe is listed in the household of Ben Bledsoe in 1870 in Elizabhtown. A James Bledsoe is listed as a millworker with a real estate value of \$400 in the 1870 Population census. He was living in the Elizabethtown post office area at the time of census.

Williams & Co.

water powered (20 hp?)
Capital investment of \$500
4 men employed for 12 months @ \$500
2500 bu wheat and corn @ \$2000 yielding 500 bls wheat flour @ \$3000 and 1 T. offal @ \$20
4000 bu all grain @ \$4000 worth \$4500 after grinding

NOTE: John Williams is listed in the Nolin Precinct with \$1600 worth of real estate in the 1870 Population Census.

Haycraft's Precinct

James B. Stovall (very faint)

16 hp steam engine and water powered grist and saw mill
3 runs of stones
Capital investment of \$4000 on grist mill
Capital investment of \$1000 on saw mill
4 men employed for 8 months @ \$440
3 men employed for 8 months @ \$340

2 men employed for 8 months @ \$300
3000 bu all grain @ \$2880 yielding 490 bls wheat flour, 600 bu corn meal, 700 bu feed and
2 T offal for combined worth of \$3870
1800 bu all grain @ \$1020 worth \$1825 after grinding
\$1000 worth of logs yielding 125,000 ft lumber worth \$2189

NOTE: James B. Stovall is listed in the post office area of Vine Grove with a real estate value of \$8000 and a personal estate value of \$1000 in the 1870 Population Census.

Thomas Dawkin (very faint)

water powered grist mill with 2 runs of stones
Capital investment of \$500
operates 9 months out of year
1872 bu corn @ \$1404 yielding 2106 bu meal worth \$1680
200 bu wheat @ \$200 yielding 660 lbs flour worth \$200

Bartley Smith

water powered grist and saw mill; 1 run of stones
Capital investment of \$1000
1 man employed for 9 months
500 bu corn @ \$450 yielding 565 bu meal worth \$505
200 logs @ \$250 yielding 40,000 ft worth \$680

NOTE: Bartley Smith is listed in the 1870 Population Census with a real estate value of \$3500 and a personal estate value of \$250.

Nolin Precinct

George W. South

water powered; 8 hp; 2 runs of stones
Capital investment of \$2000
6 men employed for 8 months @ \$400
5000 bu custom grain @ \$5000 worth after grinding \$5750
1200 bu wheat, corn and rye @ \$1200 yielding 200 bls wheat flour, 1 T feed and 200 bu meal worth \$1340

James Marriott

water powered mill; 20 hp; 3 runs of stones
Capital investment of \$20,000

6 men employed for 11 months @ \$1200
12,000 bu custom grain @ \$12,750 worth after grinding \$13,350
10,300 bu wheat, corn and rye @ \$9000 yielding 1400 bls wheat flour worth \$8400, 3000
bu meal worth \$1800, 300 bu rye meal worth \$220 and 40 T feed worth \$800

NOTE: James Marriott is listed as a miller with \$600 in real estate and \$200 in personal
estate in Stephensburg Precinct in the 1870 Population Census.

D.F. Wortham

water powered; 10 hp; 2 runs of stones
Capital investment of \$2000
5 men employed for 12 months @ \$1000
5800 bu custom grain @ \$2900 worth after grinding \$4140
1100 bu wheat, corn and rye @ \$1050 yielding 200 bls wheat flour, 100 bu meal and 2 T
feed worth \$1090

NOTE: Daniel F. Wortham is listed with a real estate value of \$12,000 and a personal
estate value of \$3000 in the 1870 Population Census. Also listed as a mill worker is Samuel
R. Wortham who was his son.

Wortham & Co.

water powered; 10 hp; 2 runs of stones
Capital investment of \$700
2 men employed @ \$700/year
1800 bu custom grain @ \$1800 worth after grinding \$2642
600 bu wheat, corn and rye @ \$550 yielding 100 bls flour, 100 bu meal and 20 T feed worth
\$690

Ashlock & White

water powered; 6 hp; 2 runs of stones
Capital investment of \$2000
2 men employed for 10 months @ \$200
2100 bu custom grain @ \$1800 worth after grinding \$2640
600 bu wheat and corn @ \$600 yielding 100 bls wheat flour, 100 bu meal and 2 T feed
worth \$690

West Point District

Link Jewell (very faint)
18 hp steam engine; saw mill
Capital investment of \$4750

4 men employed for 7 months @ \$1200
1000 logs @ \$3000 yielding 350,000 ft worth \$4400

NOTE: Only one miller with real estate is listed for West Point Precinct in the 1870 Population Census. This individual is Henry Duik who had \$900 worth of real estate and \$100 worth of personal estate. Other similar family names in the region were Tewells and Powells who were listed in the Garnettsville District of Meade County. As the boundary between Hardin and Meade Counties changed over time, a family could be listed in two different counties in two census years without ever having moved; also district boundaries may well have changed between census years.

? Pusey & Co.

30 hp steam engine powered saw mill
Capital investment of \$2400
9 men employed for 4 months @ \$1500
1000 logs @ \$1500 yielding 300,000 ft. worth \$4500

NOTE: Although no miller named Pusey was found in the Hardin county section of the 1870 Population Census, the Pusey family was involved in milling in Meade county and appear to have had comparable operations in Hardin county. The problem of changing county boundaries mentioned above also applies to this family.

1870

Meade County

District 1 (Ashcraft's)

lime kiln mentioned; name very faint

NOTE: Oren Betrick, Henry Johnson, Wiley M. Pleasant, Harrison Cowley and John Thompson are all listed as "lime burners" in the 1870 Population Census. They lived near one another in the Cedar Branch District of Meade County which bordered Ashcraft's District.

District 4 (Courthouse Brandenburg P.O.)

Lucas Gilmore

flour & grist mill, water powered (8 hp) with 1 wheel and 2 runs of French buhr stones
Capital investment of \$2600
1 man employed for 8 months
Average daily output of 20 barrels of flour
150 bu wheat @ \$150 made 30 bls of flour worth \$180

450 bu corn @ \$250 made 450 bu meal worth \$360
250 bu custom wheat @ \$250 made 50 bls worth \$275
1000 bu custom corn @ \$750 made 1000 bu @ \$830

Coleman & Pusey

water powered flour and grist mill, with 1 20 hp water wheel and 3 runs of buhr stones
Capital investment of \$6000
3 men employed for 8 months @ \$1100 yearly
Average daily output of 25 barrels of flour
1000 bu wheat @ \$1000 made 200 bls of flour worth \$1200
500 bu corn @ \$300 made 700 bu meal worth \$490
3000 bu custom wheat @ \$3000 made 600 bls flour worth \$3300
2400 bu custom corn @ \$1440 made 4000 bu meal worth \$2640

NOTE: W.S. Coleman is listed as a miller/merchant in the Brandenburg postal area in the 1870 Population Census, with \$1900 in real estate and \$505 in personal estate. Also listed in the same district and census is John S. Coleman who was identified as a miller. John R. Pusey is listed as a miller in the Brandenburg Courthouse area, and was worth \$19000 in real estate and \$2700 in personal estate. These men may have been involved in the mill now known as Doe Run Mill which was operated as the Doe Run Flour Mill between 1906 and 1930 by William A. Coleman and Dr. Pusey. This mill may have originally built by Thomas Stephenson. Another grist mill and a saw mill were also near this mill.

J. R. Pusey

water powered flour and grist mill, with 1 20 hp water wheel and 3 runs of buhr stones
Capital investment of \$6000
2 men employed for 12 months @ \$600 yearly
Average daily output of 15 barrels flour
2000 bu wheat @ \$2000 made 350 bls flour worth \$2100
1000 bu corn @ \$600 made 750 bu meal worth \$562 (possibly a mistake by census taker as this represents a loss of profit)
12,000 bu custom wheat @ \$12,000 made 2400 bls flour worth \$13,500
5000 bu custom corn @ \$3000 made 5000 bu meal worth \$3150

J. R. Pusey (wool rolls)

1 4 hp water powered wheel and 1 carding machine
Capital investment of \$1000
1 man employed for 3 months for \$200
7350 lbs @ \$3307 made 7350 wool rolls worth \$3695
Average daily capacity of 200 lbs rolls

District 2 (Cedar Branch)

S.W. Vantar (?) & Co.

24 hp steam powered grist and saw mill

Capital investment of \$1800

1 pair of corn stones (possibly operated by 2 men)

1 upright saw operated by 3 men for 3 months @ \$1500 (employment data is questionable)

1200 saw logs @ \$2400 made 400,000 ft worth \$6000

600 bu corn "for others" @ \$300 made 600 bu worth \$360

25 cords of wood for fuel @ \$75

Average daily capacity of 2000 ft of lumber and 75 bu corn

District 3 (Concordia)

NOTE: Concordia is on the western boundary of Meade county on the Ohio River.

William Fitch

10 hp steam engine for carding wool rolls and running grist mill

Capital investment of \$1000

2 men employed for 6 months @ \$150

Average daily capacity of 75 bu corn and 175 lbs of wool

5000 lbs of wool "for others" @ \$2500 made 5000 lbs wool rolls worth \$3000

3000 bu custom corn @ \$2100 made 3000 bu meal worth \$2400

500 bu apples @ \$125 made 1500 gal cider worth \$300

500 bu custom apples @ \$125 made 1500 gal cider worth \$300

75 cords of wood for fuel @ \$187

Hardin Stephenson (saw mill)

31 hp steam engine; 1 upright and 1 circular saw

Capital investment of \$5000

3 men employed for 6 months @ \$1000

Average daily capacity of 3000 ft

1500 saw logs @ \$1500 makes 450,000 ft of "all kinds lumber" worth \$7650

75 cords of wood for fuel @ \$75

John S. Pierpont (saw mill)

40 hp steam engine, 2 circular saws

Capital investment of \$2500

8 men employed for 6 months @ \$2340

3120 saw logs @ \$6240 made 1,000,000 ft worth \$12,500

slabs and dust used as fuel and is sufficient to run the mill

District 7 (Wolf Creek)

NOTE: The community of Wolf Creek is on the Ohio River in the western part of Meade County.

S. [Samuel] J. Gleason

saw and corn mill, 12 hp steam engine

Capital investment of \$750

1 Morly (?) saw

1 pr corn buhrs

Average daily capacity of 1000 ft lumber and 100 bu corn

2 "hands" employed for 6 months @ \$300/yr

300 saw logs @ \$150 made 120,000 ft lumber worth \$1440

1250 bu corn "for others" @ \$1000 made 1250 bu corn feed worth \$1200

Kentucky Lumber Co.

24 hp steam powered corn and saw mill

5 circular saws and 2 buhrs

8 men employed for 10 months @ \$3000/yr

1600 saw logs @ \$8000 made 800,000 ft worth \$12,000

2000 bu corn "for others" @ \$1000 made 2400 bu meal worth \$1800

Average daily capacity of 4000 ft and 200 bu

District 5 (Garnettsville)

William T. Fitch

30 hp water powered saw mill

Capital investment of \$2000

1 upright saw

1 man employed for 6 months @ \$250

350 logs @ \$1050 made 100,000 ft of all kinds of boards and lumber worth \$1750

Average daily capacity of 1000 ft.

NOTE: William T. Fitch was living in his father, Collins Fitch's, household in 1870.

J. N. Overton (possibly Isaac W.)

16 hp water powered saw and grist mill

Capital investment of \$1500

1 upright saw, operated by 3 men for 9 months
1 pr corn stones, operated by 1 man for 9 months
Total yearly wages of \$400
200 saw logs @ \$500 made 60,000 ft. boards/lumber worth \$1050
900 bu corn @ \$540 made 900 bu meal worth \$585
Average daily capacity of 800 ft

Samuel P. Sterrett

25 hp water powered flour and grist mill
Capital investment of \$10,000
2 runs of French buhr stones
2 men employed for 12 months @ \$700 yearly
Average daily capacity of 17 bu corn and 17 bls flour
3000 bu wheat @ \$3000 made 600 bls flour worth \$3600
450 bu corn @ \$270 made 450 bu meal worth \$525
7500 bu wheat "for owners" @ \$7500 made 1473 bls flour worth \$8838
7500 bu corn "for owners" @ \$4500 made 7500 bu meal worth \$5250

James A. Withers

16 hp water powered saw and grist mill
Capital investment of \$1800 in saw mill
Capital investment of \$700 in grist mill
1 upright saw employing 1 man for 8 months
1 run of corn stones employing 1 man for 8 months
200 saw logs @ \$650 made 60,000 ft lumber worth \$1050
1000 bu corn @ \$600 made 1000 bu meal worth \$650

Note: James A. Withers purchased the Garnettsville mill (15MD185) from William Garnett in 1851 and owned it until his death around 1886. These statistics refer to that mill.

W.G. Anderson & Co.

60 hp water and steam powered mill for cotton yarns
Capital investment of \$139,000
1 steam engine employing 20 men, 26 women and 11 children
1 water wheel employing 2 men
Annual wages of \$10,920 for 12 months
65 looms
1800 frame spindles
343,000 lbs cotton @ \$68,000 made 292,000 lbs cotton yarn worth \$116,800

60 hp water powered flouring and grist mill

Capital investment of \$40,000
1 water wheel and 5 runs of French buhr stones
3 S--t (?) mills
2 men employed for 10 months @ \$1275
Average daily capacity of 166 bls flour
15,000 bu wheat @ \$15,000 made 3600 bls flour worth \$19,500
300 bu corn @ \$180 made 300 bu meal worth \$240
15,000 bu wheat "for owners" @ \$15,000 made 3600 bls worth \$19,500

1880

Bullitt County

Grist mill on Brown's Run in Pine Tavern District; owner's name indecipherable

Capital investment of \$500
1 run of stones; probably steam powered
runs 4 months on halftime; 8 months idle
240 bu/daily (based on 12 hour day)
Total value of product only \$69

John Crumbacker (Cumabacker in other records)

grist mill located in Shepherdsville
4-ft turbine wheel powered, 39 hp; 80 revolutions/minute
9-ft fall of water
3 men employed for 8 months fulltime; 4 months idle

NOTE: William Crumbacker is listed in the 1880 Population Census as a miller; he was living with his brother, John Crumbacker, who identified himself as a farmer.

J.T. McKenzie

grist mill located in Mt. Washington on Salt River
Leffle (or Leffel) wheel (5.5 ft breadth) in use; 40 hp; 20 revolutions/minute
Also uses a 40 hp steam engine

The remainder of the sawmills in this census were all either steam powered or in districts outside Fort Knox. Their statistics are summarized below.

Sawmills in Knobs district number a total of six; one on Salt River; two not specified; two on Knot Creek. All are steam engine powered; these were probably portable.

Four saw mills are listed in Shepherdsville. One was not in operation at the time of census. One was run by a 4-ft turbine wheel (10 hp; 80 revolutions/minute); three were run by steam engines.

One steam powered saw mill is listed for Mt. Washington.

Three steam engine powered saw mills are listed in Leach's District.

The three sawmills in Pine Tavern District where Fort Knox is located offered the following statistics:

Samuel Miller

Capital investment of \$1000

2 30 hp steam engines with one boiler used

Maximum of 5 men employed on 10-hour days @ \$1.00/day for a skilled mechanic and \$.75/day for a general laborer. Total annual wages amount to \$290 for fulltime labor 12 months out of the year.

1 "gang" with 4 (?) saws; 1 circular saw; 1 band saw

Logs valued @ \$800 yielding 200,000 ft lumber worth \$2000

Mill supplies = \$100

Total value of all materials = \$900

No "remanufactures" (further processing of lumber in door frames, sashes, etc.)

Logs harvested in Bullitt county by others and brought to mill; miller does not harvest or ship logs himself

Mill located on Salt River

Hardy & Bowers

Capital investment of \$1000 (or \$1500; difficult to read)

1 40 hp steam engine with 1 boiler used

Maximum of 6 men employed on 10-hour days @ \$2.00/day for skilled mechanic and \$1.00/day for general laborer. Total annual wages amount to \$900 for halftime yearround.

1 "gang" with 5 saws; marks in circular and band saw categories, but struck over.

Logs valued @ \$1800 yielding 500,000 ft lumber worth \$5000.

Mill supplies = \$200

total value of all materials = \$2000

No remanufactures

Logs harvested in Hardin county by others and brought to mill; miler does not harvest or ship logs himself.

Mill located on Rolling Fork

Liwell & Brasher or Brasker

Capital investment of \$1600

140 hp steam engine with 1 boiler used

Maximum of 8 men employed on 10-hour days @ \$1.50/day for a skilled mechanic and

\$1.00/day for a general laborer. Total annual wages amount to \$1000 for 6 fulltime months.
Mill is idle 6 months out of the year.

1 "gang" with 2 circular saws

Logs valued @ \$1500 yielding 300,000 ft lumber worth \$3200 (?)

Mill supplies = \$150

Total value of all materials = \$1650

No remanufactures

Logs harvested in Bullitt and Hardin counties by others and brought to mill; miller does not harvest or ship logs himself.

Mill is located on Salt River.

NOTE: The names may be intended to be Lovell and Brashear. They were very difficult to read on microfilm.

1880

Hardin County

James Redmon

Possibly water powered; incomplete data; 9-ft fall of water indicated but struck out; 1 run of stones

Capital investment of \$450

1 man employed

6 bu/day capacity

Corn valued @ \$250 yielding 300 lbs cornmeal and 40 lbs hominy worth \$765

Surname not decipherable; ---ernprt? F.N.?

Capital investment of \$1000

1 man employed 6 months fulltime; 3 months 3/4 time; 2 months halftime; 1 month idle

Custom grind; 12 bu/day capacity

1 run of stones; no elevator; 14 ft fall of water on Otter Creek

1 3 ft turbine wheel (8 hp; 100 revolutions/minute)

5000 bu grain @ \$2500

Mill supplies = \$15

Total value of all materials = \$2515

Materials yield 250,000 lbs of cornmeal, 20,000 lbs of feed and 10,000 lbs of hominy (worth not decipherable).

NOTE: This mill may be attributable to Thomas Davenport.

Thorne R. Nall

Capital investment of \$800

1 man employed for 6 months fulltime; 6 months idle
1 run of stones
10 bu/day capacity
1 8 hp wheel used on Otter Creek with a 6 ft fall
400 bu grain @ \$200 yielding 22,000 lbs cornmeal and 500 lbs hominy (worth not decipherable)

Surname too faint to read; W--?, A. ?

Capital investment of \$600
1 man employed possibly quartertime
1 run of stones
11 bu/day capacity ?
1 wheel used on Otter Creek with 12 ft fall
500 bu grain @ \$250 (yield and worth not decipherable)

Elizabethtown District

James A. Keller

Capital investment of \$5000
Maximum of 6 men employed on 8-hour days for 8 months fulltime, 2 months halftime, and 2 months idle
\$1.50/day for skilled mechanic; \$1.00/day for general laborer
Mill powered by 1 25 hp steam engine with 1 boiler
3 runs of stone
custom grind; 150 bu/day capacity
1 elevator with capacity of 20 bu
7000 bu wheat @ \$7000 yielding 1400 bls flour
1000 bu wheat @ \$400 yielding 50,000 lbs cornmeal
\$3000 in mill supplies
Total worth of milled grain given as \$9,020 and \$10,402; seems to represent a discrepancy or a recheck of figures.

Nolin District (very difficult to read)

? & Collins

Capital investment of \$20,000
10 men employed on 12-hour days @ \$2.00/day for skilled mechanic and \$1.00/day for general laborer, totalling \$2000 annual wages
9 months fulltime; 3 months idle
4 runs of stones; 225 bu/day capacity
half custom grind and half ground for market

elevator with 30,000 bu capacity
Mill powered by 1 60 hp steam engine with 1 boiler
40,000 bu wheat @ \$40,000
mill supplies = \$2000
Total value of all materials = \$42,000
10,000 bls wheat flour and 400,000 lbs feed worth \$53,000

Glendale Precinct

Red Mills

Capital investment of \$4000
2 men employed on 12-hour days @ \$1.25 for skilled mechanic and \$.50/day for general laborer, totalling \$300 annual wages
6 months fulltime; 6 months 3/4 time
3 runs of stones; 235 bu/day capacity
2/3 custom grind; 1/3 for market
Mill powered by 2 5 ft (breadth) Parker wheels on Nolin River (36 hp; 48 revolutions/minute)
13,000 bu wheat @ \$13,000
1200 bu other grain @ \$600
mill supplies = \$300
Total value of all materials = \$13,900
2600 bls wheat flour
67,200 lbs cornmeal
182,000 lbs fuel
Total value of milled products = \$17,000

District 66

A.E. Hughs

Capital investment of \$5000
2 men and 4 children employed on 11-hour days from May to November and 12-hour days from November to May @ \$1.00/day for skilled mechanic and \$.50/day for general labor, totalling \$300 annually
3 months fulltime; 9 months idle
2 runs of stones; 200 bu/day capacity
All custom grind
1 16 hp wheel on Nolin River with 8 ft fall
5000 bu wheat @ \$5000
7000 bu other grain @ \$2500
mill supplies = \$25
Total value of all materials = \$7825

1000 bls wheat flour
378,000 lbs cornmeal
100 lbs hominy
\$200 in other products
Total value of milled products = \$11,000

NOTE: Hughes' Mill was located in the town of Spurrier, on the Nolin River very near Hardin county's boundary with Breckinridge.

District 68

James Harris

Capital investment of \$10,000
Maximum of 6 employees (5 men) on 8-hour day @ \$2.00/day for skilled mechanic and \$.50/day for general laborer, totalling \$250 annually
10 months fulltime; 2 months halftime
4 runs of stone; 350 bu/day capacity
1/10 custom; remainder for market
Mill powered by 2 Leffel wheels on Nolin River with 8 ft fall
(hp and breadth indecipherable; 70 revolutions/min)
9000 bu wheat @ \$9000
1000 bu other grain @ \$500
mil supplies = \$200
Total value of all materials = \$9700
1800 bls flour
50,000 lbs cornmeal
132,000 lbs feed
Total value of milled products = \$13,530

White Mills Voting District

Nevin & Connelly

Capital investment of \$3000
Maximum of 4 employees (2 men) on 8-hour days @ \$1.50/day for skilled mechanic and \$.50/day for general labor, totalling ?? (\$500 crossed out; possibly replaced with \$400, but entry not clear)
4 months fulltime; 8 months idle
2 runs of stones; 125 bu/day capacity
All grain ground for market
Mill powered by 3 4-ft wheels (2 Parker type; 1 wood); 20 hp; 60 revolutions/minute;
located on Nolin River with 7 ft fall
1200 bu wheat @ \$1220

150 bu other grain @ \$60
mill supplies = \$140
Total value of all materials = \$1520
240 bls wheat flour
8100 lbs cornmeal
18,000 lbs feed
\$25 worth of other products
Total value of milled products = \$2206

White & Payne

Capital investment of \$2500
Maximum of 12 employees (2 men?) on 10-hour from May to November, and 8-hour days from November to May @ \$2.00 for skilled mechanic and \$.60/day for general labor, totalling \$250 annually.
12 months fulltime
2 runs of stone; 100 bu/day capacity
3/4 custom grind?
Mill located on Nolin River with 7 ft fall, powered by 3 4-ft Parker wheels; 20 hp and 60 revolutions/minute
6000 bu wheat @ \$6000
6000 bu other grain @ \$3000
mill supplies = \$1000
Total value of all materials = \$10,000
1200 bls wheat flour
300,000 lbs cornmeal
120,000 lbs feed
400 lbs hominy
Total value of all milled products = \$11,275 or \$12,972 (correct figure not apparent in entry)

Joseph Richardson

Capital investment of \$5000
Maximum of 3 employees (2 men) on 10 hour days from May to November and 8 hour days from November to May @ \$1.50/day for skilled mechanic and \$.50/day for general laborer, totalling \$300 annually
12 months fulltime
2 runs of stones; 100 bu/day capacity
All custom grind
Mill located on Nolin River with 7.5 ft fall; powered by 3 5.5 ft Parker wheels; 30 hp, 60 revolutions/minute
10,000 bu wheat @ \$10,000
10,000 bu other grain @ \$3,750

mill supplies = \$100
Total value of all materials = \$13,850
2000 bls wheat flour
500,000 lbs cornmeal
200,000 lbs feed
Total value of all milled products = \$16,050

NOTE: The first name of the owner is difficult to read on microfilm, but, judging from other information, is probably Joseph D. Richardson, who purchased the White Mills that Dan Wortham had rebuilt and operated.

G. Watkins & Bros.

Capital investment of \$5000
Maximum of 3 employees (men) on 12-hour days @ \$1.50/day for skilled mechanic and \$.50/day for general laborer, totalling \$750 annually
8 months fulltime, 4 months halftime
2 runs of stones; 100 bu/day capacity
1/3 custom grind; remainder for market
Mill on Nolin (Green) River with 5.5 ft fall; powered by 2 4.5-ft wheels (1 Leffel and 1 wood); 20 hp, 38 revolutions/minute
15,000 bu wheat @ \$15,000
500 bu other grain @ \$250
mill supplies = \$525
Total value of all materials = \$15,775
3000 bu flour
27,000 lbs cornmeal
216,000 lbs feed
Total value of milled products = \$18,500

District 61 Lumber and Sawmills

James Veatch

Capital investment of \$1500
Maximum of 5 employees (3 men) on 10-hour days @ \$1.50/day for skilled mechanic and \$1.00/day for general laborer, totalling \$562/year
6 months fulltime; 6 months idle
2 circular saws powered by 1 25 hp steam engine
Logs valued @ \$1200
mill supplies = \$125
Total values of all materials = \$1325
250,000 ft lumber valued @ \$2500
No remanufactures

Logs procured locally

George W. Daugherty

Steam engine powered sawmill

Glendale Precinct

Red Mills

Sawmill on Nolin River; powered by a 5 ft tubwheel

Elizabethtown District

James A. Keller

Steam engine powered saw mill

A. E. Hughs

Sawmill on Nolin River, powered by 1 10 hp water wheel

White Mills Voting District

White & Payne

Sawmill on Nolin River; powered by 2 2-ft, 18 hp Hothes ? wheels

District 71

Rohn & Co.

Mill on Salt River powered by 1 16 hp steam engine with 1 boiler

NOTE: This surname may actually be the Rihn family who were French. Anthony and John Rihn were listed as retired merchants living in Elizabethtown in 1870. Anthony Rihn had a real property value of \$7000 and a personal property value of \$2000. His sons, James and William, may have operated a sawmill.

Atcher's Precinct

John Stovall

Capital investment of \$200?

Maximum of 2 employees (1 man) on 10 hour days from May to November and 8 hour days from November to May @ \$1.00/day for skilled mechanic, totalling \$200
8 months fulltime; 4 months idle
1 circular saw
Logs valued @ \$750
mill supplies = \$40
Total value of all materials = \$790
100,000 ft lumber worth \$1500
Logs procured in immediate vicinity; remanufactures made
Mill on Salt River; powered with 1 6 hp water wheel

Difficult to read; M--d-- (Masden?) & Pinkons?

Capital investment of \$2000
Maximum of 5 employees (4 men) on 10 hour days from May to November and 8 hour days from November to May @ \$1.00/day for skilled mechanic and \$.50/day for general laborer, totalling \$800 annually.
8 months fulltime; 4 months idle.
1 "gang" with 1 circular and 1 bandsaw
Logs valued @ \$3000
mill supplies = \$500
Total value of all materials = \$3500
400,000 ft lumber worth \$6000
Logs procured in immediately vicinity; remanufactures made
Mill powered by 1 6 hp steam engine with 1 boiler

NOTE: Hardin Masden lived in Atcher Precinct and may have been one of the proprietors of this mill.

Keane & Clauson

Capital investment of \$1200
Maximum of 10 employees (2 men) on 10 hour days from May to November and 8 hour days from November to May @ \$1.00/day for skilled mechanic and \$.50/day for general laborer, totalling \$100 annually.
4 months halftime; 8 months idle
1 gang with 2 saws?; 1 circular and 1 bandsaw?
Logs valued @ \$800
mill supplies = \$200
Total value of all materials = \$1000
160,000 ft of lumber valued @ \$2400
Logs procured from the Salt River hills; no remanufactures
Mill on the Salt River with a 9 ft fall; powered by 1 9 ft water wheel (8 hp; 120 revolutions/minute)

NOTE: These proprietors may have been George E. Clawson and Joseph Kayne.

George Bowers

Capital investment of \$4000

Maximum of 2 employees (1 man) on 10 hour days from May to November and 8 hour days from November to May @ \$1.00/day for skilled mechanic and \$.75/day for general laborer, totalling \$100 annually.

4 months halftime; 8 months idle

1 gang with 1 circular saw

Logs valued @ \$600

mill supplies = \$60

Total value of all materials = \$660

120,000 ft lumber worth \$1800

Logs procured from Mill Creek hills; remanufactures made

All logs procured by proprietor; no shipping

Powered by 1 6 hp steam engine with 2 boilers

Colesburg District

John Caswell

Capital investment of \$1000

Maximum of 2 employees (1 man) on 10 hour days @ \$.70/day, totalling \$112 annually.

5 months fulltime; 7 months idle

1 circular and 1 muley saw

Logs valued @ \$350

mill supplies = \$50

Total value of all materials = \$400

70,000 ft lumber worth \$1050

No procurement information; no remanufactures

Powered by 1 12 hp steam engine with 1 boiler

C.A. Parder

Capital investment of \$1000

Maximum of 2 employees (1 man) on 10 hour days from May to November and 8 hour days from November to May @ \$1.00/day, totalling \$100 annually.

8 months fulltime; 4 months idle

2 circular saws

Logs valued @ \$500

mill supplies = \$50

Total value of all materials = \$550

100,000 ft lumber and 12,000 trimmed laths worth \$1500
Logs procured from neighborhood; no other remanufactures
Mill powered by 1 30 hp steam engine with 1 boiler

1880

Meade County

Sawmills (listed only those producing \$500 or more annually)

Wolf Creek District (west of military reservation)
J.F. Morgan's steam powered mill on the Ohio River

5th District (Garnettsville P.O.)

Junly (?) Jones

Capital investment of \$1000
Maximum of 10 employees (4 men) on 12 hour days @ \$2.00/day for skilled mechanic and \$.75/day for general laborer, totalling \$1000 annually
Operated 6 months fulltime, 6 months idle
2 circular saws
Logs values @ \$2000
mill supplies = \$200
Total value of all materials = \$2200
400,000 ft of lumber worth \$4000
mill is located on Ohio River, and is steam powered with 1 30 hp engine and 1 boiler

C. Fitch & Company (note to be omitted because of inadequate annual value); also listed but struck out on another schedule which gave additional data

Capital investment of \$1000
Maximum of 4 employees @ \$1.00/day for skilled mechanic and \$.75/day for general laborer, totalling \$150 annually
Operated only 1 month fulltime; the remaining 11 months mill was idle
Total value of products from mill = \$300
Mill located on Otter Creek; operated by 15 hp water wheel (cannot read type); 80 revolutions/minute

Burch & Lane

Capital investment of \$500
Maximum of 4 employees (2 men) on 12 hour days @ \$2.00/day for skilled mechanic and \$.75/day for general laborer, totalling \$275 annually
6 months halftime and 6 months idle

Logs valued at \$500
mill supplies = \$125
Total value of all materials = \$625
100,000 ft lumber worth \$1500
Mill located on Otter Creek with 9 ft fall
1 10 hp water wheel (type: Parch???), 60 revolutions/minute

Grist and Flouring Mills (must have annual value of \$500 or more)

J. R. Pusey

Capital investment of \$8000
Maximum of 3 men working 12 hour days from May to November and 10 hour days from November to May, @ \$2.00/day for skilled mechanic and \$.75/day for general laborer, totalling \$800
Mill operated 12 months fulltime
4 runs of stones; 150 bu daily capacity
More than half custom work
Located on Doe Run with 26 ft fall
Powered by 2 water powered turbine wheels, 1 2/3 ft in breadth, 30 hp, 220 revolutions/minute
25,000 bu wheat @ \$22,000
8000 bu other grain @ \$3200
mill supplies = \$1200
Total value of all materials = \$26,900
5000 bls wheat flour
50 bls rye flour
400,000 lbs cornmeal
200,000 lbs feed
Total value of all products = 29,1?? [check this figure]

W.L. Coleman

Capital investment of \$5000
Maximum of 3 men working 12 hour days from May to November and 10 hour days from November to May @ \$2.00/day for skilled mechanic and \$.65/day for general laborer, totalling \$1000 annually
12 months fulltime
3 runs of stones; 316 bu daily capacity
half custom; half for market
Mill located on Doe Run Creek at 17 ft fall; powered by 2 2.5 ft turbine water wheels, 20 or 25 hp, 210 revolutions/minute
9390 or 19390 bu wheat @ \$9390 or \$19390
9390 bu other grain @ \$3756

mill supplies = \$60
Total value of all materials = \$13,206
1878 bls wheat flour
469,500 lbs cornmeal
200,000 lbs feed
Total value of all products = illegible

Herndon & Co.

Capital investment of \$30,000
Maximum of 2 men working 12 hour days from May to November and 10 hour days from November to May @ \$2.00/day for skilled mechanic and \$.65/day for general laborer, totalling \$600 annually
12 months fulltime
5 runs of stones; 400 or 900 bu daily capacity
About 1/4 custom grind
Mill located on Doe Run, with 11 or 14 ft fall
Powered by 4 1.5 ft? turbine water wheels, 60 hp
10,000 bu wheat @ \$8500
6000 bu other grain @ \$2000
mill supplies = \$1000
Total value of all materials = \$11,500
2000 bls wheat flour
200 bls rye flour
250,000 lbs cornmeal
80,000 lbs feed
Total value of products = \$13,900

Grahamton District

W. G. Anderson & Co.

Capital investment of \$25,000
Maximum of 6 employees (3 men) working 12 hour days from May to November and 10 hour days from November to May, @ \$2.00/day for skilled mechanic and \$1.00/day for general laborer, totalling \$11,200 annually (this might be \$1200)
3 months fulltime, 6 months 3/4-time, 3 months halftime
5 runs of stones; 600 bu daily capacity
half in custom work
1000 bu daily capacity for elevator installed
Mill located on Otter Creek with 29 ft fall
Powered by 2 50 hp turbine water wheels with 17 or 19 ft breadth; 250 revolutions/minute
30,000 bu wheat @ \$30,000
6000 bu other grain @ \$2500

mill supplies = \$400
Total value of all materials = \$32,900
6000 bls wheat flour
336,000 lbs cornmeal
270,000 lbs feed
Total value of products = \$41,212?

Samuel Sterrett

Capital investment of \$6000
Maximum of 2 men working 12 hour days from May to November and 10 hour days from November to May, @ \$1.50/day for skilled mechanic and \$.50/day for general laborer, totalling \$525 annually
9 months 3/4-time, 3 months idle
2 runs of stones; 100 bu daily capacity
half custom work
200 bu elevator installed
Mill located on Otter Creek at 11 ft fall
Powered by 1 35 in turbine water wheel, 27 hp, 146 revolutions/minute
3000 bu wheat @ \$3000
3000 bu other grain @ \$1200
mill supplies = \$50
Total value of all materials = \$4250
600 bls wheat flour
168,000 lbs cornmeal
44,400 lbs feed
Total value of products = \$5120??? [check film; hard to read]

Burch & Lane

Capital investment of \$3600
Maximum of 2 men working 12 hour days from May to November and 10 hour days from November to May, @ \$1.50/day for skilled mechanic and \$.75/day for general laborer, totalling \$225 annually
6 months halftime; 6 months idle
2 runs of stones; 175 bu daily capacity
half custom grind
175 bu elevator installed
Mill located on Otter Creek at 9 ft fall
Powered by 2 4 ft turbine water wheels, 22 hp, 60 revolutions/minute
5000 bu wheat @ \$5000
5000 bu other grain @ \$2500
mill supplies = \$50
Total value of all materials = \$7550

1000 bls wheat flour
225,000 lbs cornmeal
29,000 lbs feed
Total value of products = [illegible]

APPENDIX B. FEDERAL CENSUS STATISTICS FOR INDIVIDUALS IN MILL-RELATED OCCUPATIONS, BULLITT, HARDIN AND MEADE COUNTIES

BULLITT COUNTY MILLERS BY YEAR

Last Name	First name	Occupation	Real estate value	Personal value	Birthplace
YEAR:1850 DISTRICT:NOT GIVEN					
BALEE/BALES	JOEL	MILLER	8,000.00	0.00	value value
BARCLAY	THOMAS P.	MILLER	0.00	0.00	
BARCLAY	WILLIAM S.	MILLER	2,700.00	0.00	
DAVISON	RUBIN	MILLER	0.00	0.00	
FRIDDLE	JOHN	MILLER	0.00	0.00	
GENTRY	JAMES. B.	MILLER	0.00	0.00	
GENTRY	LEWIS	MILLER	0.00	0.00	
GUILT	LEONARD	MILLER	400.00	0.00	
HARRIS	JOHN T.	MILLER	0.00	0.00	
HOUGH	JOHN	MILLER	0.00	0.00	
JARBOE	JOHN	MILLER	0.00	0.00	
KINSINGER	JOHN	MILLER	0.00	0.00	
MCKENZY	GEORGE M. D.	MILLER	0.00	0.00	
MILLER	GEORGE S.	MILLER	10,000.00	0.00	
SCEARCE	STEPHEN	MILLER	2,000.00	0.00	
WOOD	JOSEPH	MILLER	0.00	0.00	
YEAR:1860 DISTRICT:3;MT. WASHINGTON P.O.					
BARCLAY	W.[WILLIAM] S.	MILLER	3,000.00	500.00	VA.
BARKER	J.A.	MILLER	0.00	100.00	OH.
BELL	CHARLES	MILLER/FARMER	5,500.00	4,000.00	KY.
BIRCH	J.R.	MILLER	7,000.00	1,250.00	KY.
DYE	F.	MILLWRIGHT	0.00	0.00	KY.
HARRIS	J.T.	MILLER	4,500.00	2,000.00	KY.
HOGLAN	THOMAS S.	MILLER	0.00	300.00	KY.
KOCH	JAMES	MILLER	2,000.00	500.00	PRUSSIA
PARISH	D.	MILLER	1,000.00	500.00	KY.
PARRSON	JOHN	MILLER	0.00	100.00	OH.
SHOWALTER	GEORGE	MILLER	0.00	100.00	VA.
SWEARINGEN	O.	MILLER	16,325.00	2,400.00	KY.
YEAR:1870 DISTRICT:SHEPARDVILLE P.O.					
BELL	CHARLES	MILLER	7,000.00	1,150.00	VA.
BELL	JOHN S.	MILLER	1,000.00	150.00	KY.

BOONE	CHARLES	SAWMILL		KY.
BREEDING	JASPER	SAWMILL		VA.
CACKET	JOHN	SAWMILL		SWITZERLAND
COLLINGS	ALFRED	MILLER	1,200.00	KY.
CRUMBAKER	JOHN	MILLER	9,600.00	MD.
DOHERTY	LEVE	SAWMILL		KY.
ELLIS	JAMES	SAWMILL	1,065.00	IND.
FIELCE?	JOHN	MILLER		KY.
FIELCE?	WILLIAM	MILLER		KY.
FOX	HAL	SAWMILL		KY.
FOX	JAMES	SAWMILL		KY.
HARSHFIELD	WALTER	MILLER	2,000.00	KY.
HARSHFIELD	WILLIAM	MILLER	2,000.00	KY.

YEAR:1870 DISTRICT:MT. WASHINGTON P.O.

JUDOR	A.	GRIST MILL		OH.
LAWSON?	JOHN W.	MILLER		KY.
LEWIS	JOHN	GRIST MILL	300.00	KY.
MILLER	JOHN D.	MILLER	100.00	OH.
MOBLEY	JOBE	MILLER	1,500.00	KY.
PARSON	JOHN	MILLER		KY.
SHORT	JOHN	SAWMILL		OH.
STOCKER	AUSTIN	GRIST MILL		SWITZERLAND
TAYLOR	ALEX	SAWMILL		KY.
WEAVER	RICHARD	GRIST MILL	600.00	KY.
WELLES	GEORGE N.	MILLER	9,500.00	KY.

YEAR:1880 DISTRICT:PINE TAVERN;#35

BARBER	JOHN	SAWMILL WORKER		KY.
BELL	JAMES	MILL HAND		KY.
BELL	WARREN	MILL HAND		KY.
BELL	WILLARD	MILL HAND		KY.
BRASHEAR	B.H.	MILLING LUMBER		KY.
BRASHEAR	JULIUS	MILLING LUMBER		KY.
BROWN	JAMES N.	SAWMILL WORKER		KY.
BROWNE	JAMES L.	MILLER, RETIRED		KY.
CARPENTER	JAMES	CUTTING LOGS		KY.
CHILDERS	JOHN	SAWMILL WORKER		KY.
CLARK	JOHN	SAWMILL WORKER		KY.

Last Name	First name	Occupation	Real estate value	Personal value	Birthplace
CRUMBACKER	WILLIAM	MILLER			MD.
DAVIS	C.C.	SAW/GRIST MILL			KY.
DAWKINS	W.L.	SAWMILL OWNER			KY.
FRAUCH/FRENCH?	WILLIAM	SAWMILL WORKER			KY.
FURGURSON	WILLIAM	SAWMILL WORKER			KY.
LEACH	ENOCH	SAWMILL WORKER			KY.
MARTIN	HUGH	MILLER			IND.
MARTIN	JOHN	MILLER			IRELAND
MARTIN	PETER	MILLER			IND.
MCKENZIE	J.	MILLER			KY.
NICHOLSON	J.B.	SAWMILL WORKER			KY.
QUICK	JOHN	SAWMILL WORKER			KY.
RANDOLP	ALBERT	SAWMILL WORKER			KY.
SAMUELS	JOHN T.	SAWMILL WORKER			KY.
SHORT	JOHN	SAWMILL WORKER			OH.
SHOWALTER	RICHARD	SAWMILL WORKER			VA.
SMITH	BALLARD	MILLER			KY.
SMITH	JOHN D.	MILLER			IND.
STENCIL	CRAWFORD	SAWMILL WORKER			KY.
TEAFORD	JOHN	MILLER			IND.
TYLER	J.W.	SAWMILLER			KY.
WEBB	ISAAC	SAWMILL WORKER			KY.
WELLER	J.[JACOB] J.	MILLER			KY.

HARDIN COUNTY MILLERS BY YEAR

YEAR:1850 DISTRICT:SOUTHERN #2

ATWOOD	HIRAM P.	MILLER/MECHANIC	0.00	1,800.00	KY.
CRAIG	HENRY A.	MERCHANT/MILLER	5,000.00	0.00	PA.
DICKINSON	JAMES	MILLWRIGHT	0.00	0.00	KY.
KELLUM	HARRISON	MILLER			
LAMBERT	HUGH	MILLWRIGHT/FARM	0.00	0.00	KY.
LEASOR	THOMAS J.	MILLER	0.00	0.00	KY.
MORRISON	JOHN	WOOL CARDER	0.00	0.00	KY.

PERCEFULL	RICHARD	MILLER/FARMER	1,500.00	0.00	KY.
RICHARDSON	DANIEL L.	MILLER/FARMER	2,000.00	0.00	KY.
THOMAS	HENRY	MILLWRIGHT	0.00	0.00	KY.
WILLIAMSON	BLAND H.	MILLER	0.00	2,500.00	
YEAR:1850 DISTRICT:NORTHERN					
WOOD	JONATHAN	WOOL CARDER	0.00	0.00	KY.
YEAR:1860 DISTRICT:#2;STEPHENSBURG P.O.					
BALL	KALEB	MILLER	0.00	0.00	PA.
BROADBENT	BEN	MILLER	0.00	0.00	ENGLAND
BUTTERWORTH	ISAAC	MILLWRIGHT	100.00	200.00	KY.
DRAKE	FRANCIS	MILLER	300.00	130.00	VA.
GENTREES	ELDRIDGE J.	MILLER	2,000.00	0.00	KY.
LEADBETTER	WILLIAM	MILLER	0.00	0.00	IRELAND
MCCAGUE	C.W.	MILLER	300.00	1,000.00	PA.
MUMFORD	THOMAS F.	MILLWRIGHT	0.00	0.00	KY.
PARK	H.W.	MILLER	3,000.00	300.00	KY.
PATTON	I.H.	MILLER	7,600.00	500.00	VA.
PUSEY	J.R.	MILLER	2,500.00	400.00	KY.
SWAN	JOHN	MILLER	300.00	500.00	KY.
TAYLOR	JOHN G.	MILLER	0.00	0.00	KY.
WORTHAM	DANIEL	MILLER	3,500.00	3,000.00	KY.
YEAR:1870 DISTRICT:WEST POINT PRECINCT					
ALLEN	WILLIAM	SAWMILLWORKER	0.00	0.00	KY.
ALLEN	ALPHEUS	MILLER	1,000.00	0.00	NJ.
BAILEY	WALTER	SAWMILLWORKER	0.00	100.00	KY.
BALEN	ALONZO	MILLWORKER	0.00	0.00	OH.
BISHOP	JAMES	MILLWORKER	0.00	0.00	KY.
BLEDSE	JAMES	MILLWORKER	400.00	0.00	KY.
BUCKNER	JOHN J.	MILLER	200.00	200.00	VA.
CASH	THOMPSON	MILLER	7,000.00	9,000.00	KY.
CLIFTON	CHARLES B.	SAWMILLWORKER	0.00	0.00	TN.
CORSELS	ROBERT	MILLWORKER	0.00	0.00	IRELAND
CRAIG	CHARLES	MILLWORKER	0.00	0.00	KY.
CRAIG	COLONEL	MILLWORKER	0.00	0.00	KY.
CRAIG	JAMES	MILLWORKER	0.00	0.00	KY.
DAUGHERTY	THOMAS	MILLWORKER	0.00	0.00	KY.

DAVENPORT	THOMAS	MILLER	5,000.00	2,325.00	KY.
DAWSON	ALFRED	STEAMMILLWORKER	0.00	0.00	VA.
DUICK	HENRY	MILLER	900.00	100.00	BADEN, GERMANY
NALL	JACOB	SAWMILLWORKER	0.00	0.00	KY.
SHEETS	S.E.	MILLER/FARMER	3,000.00	1,200.00	KY.
WEST	JOHN C.	SAWMILLWORKER	0.00	0.00	KY.
YEAR:1870 DISTRICT:MEETING CREEK					
DRAKE	ALFRED	MILLER	50.00	100.00	KY.
DRAKE	JOHN	MILLWORKER	0.00	0.00	KY.
LYONS	ELIJAH	MILLER	0.00	0.00	
PAUL	EDWARD T.	MILLER	600.00	0.00	KY.
YEAR:1870 DISTRICT:NOLIN					
ELDRIDGE	BALDIN	MILLWORKER	0.00	0.00	LA.
HAWKINS	VINCENT	MILLWORKER	0.00	0.00	KY.
WILLIAMS	JOHN	MILLER	1,600.00	0.00	KY.
YEAR:1870 DISTRICT:WALLINGFORD'S					
FOYLE	ROBERT	MILLWORKER	0.00	0.00	KY.
RICHARDSON	G.D.	MILLER	0.00	200.00	KY.
YEAR:1870 DISTRICT:STEPHENSBURG					
HARDIN	MARTIN	MILLER	2,000.00	700.00	KY.
MARRIOTT	JAMES	MILLER	600.00	200.00	KY.
PICKSAW	WILLIAM	MILLER	0.00	0.00	OLDENBURG, GER.
THOMAS	JO. W.	MILLWORKER	0.00	0.00	
WHITE	MARTINE E.	MILLER	300.00	0.00	KY.
WORTHAM	DANIEL F.	MILLER	12,000.00	3,000.00	KY.
WORTHAM	SAMUEL R.	MILLWORKER	0.00	0.00	KY.
YEAR:1870 DISTRICT:ELIZABETHTOWN					
HASLEM	JAMES	MILLER	0.00	150.00	ENGLAND
HASLEM	OSCAR A.	SAWMILLWORKER	0.00	0.00	PA.
HOWELL	SAMUEL	MILLER	500.00	250.00	KY.
MILLER	D.G.	STEAM MILLER	7,000.00	3,000.00	
YEAR:1870 DISTRICT:COLESBURG					
HENDRICK	WILLIAM	SAWMILLWORKER	0.00	0.00	TN.

MAGCABER	HOLMES	SAWMILLWORKER	0.00	0.00	PA.
MAGCAUBER	HOMER	SAWMILLWORKER	0.00	0.00	PA.
MARSHALL	JOHN S.	MILLER	3,000.00	500.00	PA.
PARSONS	JOHN T.	SAWMILLWORKER	0.00	100.00	KY.
SHERRARD	WILLIAM J.	SAWMILLWORKER	0.00	0.00	KY.
YEAR:1870	DISTRICT:HAYCRAFT'S				
JORDON	HARRY	MILLWORKER	0.00	0.00	KY.
SMITH	BARTLEY	MILLER	3,500.00	250.00	KY.
STOVALL	JAMES B.	MILLER	8,000.00	1,000.00	KY.
YEAR:1870	DISTRICT:ATCHER				
STOVALL	JOHN O.	MILLER	5,000.00	1,000.00	
YEAR:1880	DISTRICT:WEST POINT DISTRICT				
??	JAMES	SAWMILLWORKER	0.00	0.00	KY.
??	MARSHALL J.	MILLWORKER	0.00	0.00	KY.
ALBERT	PETER	MILLER	0.00	0.00	KY.
ATTWOOD	SILVESTER	MILLER (GRIST)	0.00	0.00	KY.
BENNY	BRUMMETT	MILLER	0.00	0.00	KY.
BROWN	PHILLYK	MILLER	0.00	0.00	KY.
BURK	JAMES W.	SAWMILLWORKER	0.00	0.00	KY.
COLLINS	E.B.	MILLER	0.00	0.00	KY.
HARRIS	ALBERT	SAWMILLWORKER	0.00	0.00	KY.
HILL	JAMES	MILLER	0.00	0.00	KY.
HOLT	JOSEPH	MILLER	0.00	0.00	KY.
YEAR:1880	DISTRICT:WALLINGFORD DISTRICT 3				
HUGHES	WILLIAM	FLOUR MILLER	0.00	0.00	KY.
KELLER	JAMES A.	MILLER	0.00	0.00	IND.
LYONS	ELIJAH	MILLER	0.00	0.00	KY.
MCDONALD	ARCHIBALD	MILLER	0.00	0.00	MEADE CO., KY.
MINTON	THOMAS	MILLER	0.00	0.00	KY.
MONFORD	FRANCIS	MILLER	0.00	0.00	SHELBY CO., KY.
MORGAN	JOHN C.	MILLER	0.00	0.00	KY.
MORGAN	JOHN H.	SAWMILLWORKER	0.00	0.00	KY.
MORGAN	JONAS	SAWMILLWORKER	0.00	0.00	KY.
MUDD	JAMES	MILLER	0.00	0.00	KY.
PAYNE	RICHARD	MILLER	0.00	0.00	KY.

PRYTHERGRAS	ERIN	MILLER	0.00	0.00	WALES
SMALLWOOD	WILLIAM	MILLER	0.00	0.00	KY.
STOVALL	JOHN	MILLER	0.00	0.00	KY.
THURMAN	E.K.	CIRCULAR SAWYER	0.00	0.00	KY.
VESELS	WILLIAM	SAWYER	0.00	0.00	HARDIN CO., KY.
WALKER	JOHN	MILLER	0.00	0.00	KY.
WALL/HALL	THOMAS	MILLER	0.00	0.00	KY.
WATHONE	THOMAS	MILLER	0.00	0.00	KY.
WILKINS	GEORGE	MILLER	0.00	0.00	GERMANY
WINCHELL	JOHN	MILLER	0.00	0.00	IND.
WYNN	W.W.	MILLWRIGHT	0.00	0.00	KY.

MEADE COUNTY MILLERS BY YEAR

Last Name	First name	Occupation	Real estate value	Personal value	Birthplace
YEAR:1850 DISTRICT:NOT KNOWN					
BERRY	ANTHONY	MILLWRIGHT	0.00	0.00	KY.
CARLISLE	JOHN	MILLER	0.00	0.00	V.A.
COLEMAN	JOHN D.	MILLER	0.00	0.00	KY.
DAVIS	AUGUSTUS	CARDER	0.00	0.00	KY.
DOUGLAS	YARRVIN	MILLER	0.00	0.00	NY.
HOCY	JOHN H.	TAILOR	0.00	0.00	NY.
JOHNSON	JOHN	COTTON MANFTR.	0.00	0.00	MASS.
JOHNSON	JOHN	MILLER	3,000.00	0.00	V.A.
LANE	WILLIAM	MILLER	3,000.00	0.00	TN.
MATTINGLY	BERNARD	WEAVER	0.00	0.00	KY.
MATTINGLY	IGNATIUS	FACTORY HAND	0.00	0.00	KY.
MCDONALD	ALEXANDER	CARDER	0.00	0.00	SCOTLAND
NELSON	NOAH	MILLER	0.00	0.00	KY.
SCOTT	WALTER	MILLER	0.00	0.00	UNKNOWN
SHERMAN	DANIEL	MILLER	0.00	0.00	KY.
SHERMAN	SAMUEL	MILLER	300.00	0.00	V.A.
YOUNG	REBECCA	MILLER	0.00	0.00	KY.
YOUNG	RUTHY	SEAMSTRESS	0.00	0.00	KY.

YEAR:1860 DISTRICT:BRANDENBURG P.O.

ALEXANDER	A.J.	MILLER	24,500.00	10,475.00	VA.
ALLEN	DIMIT	MILLER/FARMER	4,000.00	454.00	KY.
ALLEN	ELIZABETH	FACTORY HAND	0.00	0.00	KY.
BROWN	JOHN	MILLER	0.00	700.00	IRELAND
BROWN	MARTIN	MILLER	0.00	0.00	IRELAND
BROWN	PAT	MILLER	0.00	0.00	IRELAND
BUSSABARGER	J.H.	MILLER	340.00	0.00	VA.
BUTTERWORTH	I.B.	MILLWRIGHT	200.00	0.00	UNKNOWN
CAIN	JOHN, JR.	MILLER	0.00	200.00	KY.
CHAMBERLAIN	FRANCES	FACTORY HAND	0.00	0.00	KY.
CHAMBERLAIN	MARY (OLDER)	FACTORY HAND	0.00	0.00	KY.
CHAMBERLAIN	MARY (YOUNGER)	FACTORY HAND	0.00	0.00	KY.
CHAMBERLAIN	SARAH	FACTORY HAND	0.00	0.00	KY.
CHAMBERLAIN	THOMAS	FACTORY HAND	0.00	200.00	KY.
CHAMBERLAIN	WILLIAM	FACTORY HAND	0.00	0.00	KY.
COLEMAN	ALEXANDER	FLOURMILLWKR	0.00	0.00	UNKNOWN
COLEMAN	ANDREW B.	MILLER	0.00	500.00	UNKNOWN
COLEMAN	JOHN D.	MILLER/FARMER	1,200.00	434.00	KY.
COLEMAN	JOHN S.	MILLER			KY.
COLEMAN	W.S.	MILLER/MERCHANT	1,900.00	505.00	KY.
COLEMAN	WASHINGTON C.	MILLER	3,500.00	700.00	UNKNOWN
DODDS	ANTHONY	MILLER	0.00	150.00	IND.
DOYLE	PAT	MILLWRIGHT	0.00	0.00	IRELAND
DRAKE	WILLIAM T.	MILLER	0.00	40.00	KY.
EARLES	MARTHA	SEWING	0.00	0.00	IND.
EARLES	SALLY	SEWING	0.00	0.00	IND.
FITCH	COLLINS	MILLER/FARMER	8,000.00	4,860.00	NY.
FITCH	JAMES T.	SAWMILLER	60.00	100.00	UNKNOWN
FITCH	WILLIAM T.	MILLER	0.00	200.00	KY.
FORBES	LEWIS	FACTORY HAND	0.00	0.00	KY.
GARNETT	FRANKLIN	MILLWRIGHT	0.00	200.00	KY.
GREENWALT	WILLIAM	LABORER	0.00	0.00	KY.
HARDAWAY	WILLIAM B.	MILLER	1,500.00	1,700.00	PA.
JENNER	E.S.	MILLER	0.00	1,000.00	NY.
JENNER	WILLIAM E.	MILLER	100.00	0.00	KY.
LAMASTER	RICHARD	FACTORY HAND	0.00	0.00	KY.
LEWIS	CATHERINE	FACTORY HAND	0.00	0.00	IND.
LEWIS	MARY	FACTORY HAND	0.00	0.00	IND.
MATTINGLY	BERNARD	FACTORY HAND	1500.00	200.00	KY.

SIEBERT	J.P.	MILLER	0.00	0.00	IND.
WARRENER	A.	DYER	0.00	0.00	BADEN
YEAR:1860 DISTRICT:BRANDENBURG					
JONES	STEPHEN B.	MILLWRIGHT	0.00	700.00	KY.
LOWD	THOMAS C.	MILLER	2,000.00	2,000.00	MASS.
MCDONALD	ALEX	WOOL CARDER	0.00	200.00	SCOTLAND
MILLS	JAMES	MILLWORKER	0.00		UNKNOWN
MORGAN	HORACE	MILLWORKER			UNKNOWN
NELSON	NOAH	MILLER	0.00	100.00	KY.
OVERTON	I.H.	MILLER	7,000.00	2,460.00	NC.
OVERTON	J.F.	MILLER	4,000.00	200.00	KY.
PIERPOINT	JOHN S.	SAWMILLER	5,750.00	3,500.00	KY.
PUSEY	JOHN R.	MILLER	19,000.00	2,700.00	KY.
SINGLETON	JOHN S.	MILLER	700.00	600.00	KY.
SINGLETON	WILLIAM H.H.	MILLWRIGHT			IND.
SMITH	FREDERIC	MILLER	0.00	0.00	ENGLAND
SMITH	GEORGE	CARDER	0.00	0.00	ENGLAND
SMITH	JAMES	MILLER	0.00	0.00	ENGLAND
STERRETT	CALVIN S.	MILLER	0.00	1,000.00	PA.
STERRETT	CALVIN S.	MILLER	0.00	1,775.00	PA.
STERRETT	SAMUEL P.	MILLER	15,000.00	4,212.00	PA.
WEBB	WILLIAM A.	MILLER	6,000.00	3,700.00	KY.
WEST	JAMES	MILLWORKER			UNKNOWN
WRIGHT	JAMES G.	MILLWRIGHT	0.00	600.00	UNKNOWN
YEAR:1860 DISTRICT:GARNETTSTVILLE					
ALLEN	AMANDA	FACTORY HAND	0.00	0.00	KY.
AYLSWORTH	P.Z.	COTTON SPINNER	0.00	1,000.00	RI.
BERTH	JAMES	WOOL CARDER	0.00	0.00	KY.
BRANDENBURG	DAVID	TEAMSTER	0.00	125.00	KY.
BRANDENBURG	HENRY	LABORER	600.00	250.00	KY.
BRANDENBURG	HENRY, JR.	LABORER	0.00	0.00	KY.
BRANDENBURG	JOHN	LABORER	0.00	0.00	KY.
BRANDENBURG	PETER	LABORER	0.00	200.00	KY.
BUCKLES	ASA	LABORER	0.00	100.00	KY.
BUCKLES	EMILY R.	FACTORY HAND	0.00	0.00	IND.
BUCKLES	LLOYD	FACTORY HAND	0.00	0.00	IND.
BUCKLES	WILLIAM HENRY	FACTORY LABORER	0.00	0.00	VA.

CARR	GEORGE MCD.	FACTORY HAND	0.00	75.00	MO.
CHENAULT	CATHERINE	FACTORY HAND	0.00	0.00	KY.
CHENAULT	ELIZABETH	FACTORY HAND	0.00	0.00	KY.
CHENAULT	FELIX	FACTORY HAND	0.00	400.00	KY.
DECKER	ANDERSON	FACTORY HAND	0.00	0.00	KY.
DODDS	ANTHONY	MILLER	0.00	150.00	IND.
ERHARD/AHAD	BESTA	WEAVER	0.00	75.00	BADEN
ERHARD/AHAD	RHEINHARD	FACTORY HAND	0.00	0.00	BADEN
HAYS	MARIAH L.	FACTORY HAND	0.00	0.00	KY.
MCRADY	ELI	FACTORY HAND	0.00	75.00	KY.
MCRADY	ISAAC	FACTORY HAND	0.00	0.00	KY.
MCRADY	MARGARET	FACTORY HAND	0.00	0.00	KY.
SPANGLEBURG	ANDREW	FACTORY HAND	0.00	200.00	PRUSSIA
SPANGLEBURG	ADAM	WEAVER	0.00	0.00	HESS
STREBEL	CLEMENT	FACTORY HAND	0.00	100.00	BADEN
STREBEL	WILLIAM	LABORER	0.00	0.00	BADEN
STREBEL	FRANCIS	FACTORY HAND	0.00	0.00	BADEN
STREBEL	CLEMENT, JR.	FACTORY HAND	0.00	0.00	BADEN
WHITE	JOHN	COTTON SPINNER	0.00	2150.00	ENGLAND
WHITELY	THOMAS	FACTORY LABORER	0.00	250.00	KY.

153

YEAR:1870 DISTRICT:BRANDENBURG COURTHOUSE DISTRICT 4

BUTTERWORTH	J.B.	MILLWRIGHT	200.00	0.00	VA.
COLEMAN	A.B.	MILLER	0.00	500.00	KY.
COLEMAN	ALEXANDER	FLOURMILLWORKER	0.00	0.00	KY.
COLEMAN	JOHN L.	MILLER	0.00	300.00	KY.
FITCH	JAMES	SAWYER @ MILL	600.00	100.00	KY.
FITCH	WILLIAM H.	WOOL CARDER	250.00	2,500.00	MASS.
HARDAWAY	WILLIAM	MILLER	1,500.00	700.00	ARK.
MILLS	JAMES	SAWMILLWORKER	0.00	0.00	KY.
MOORE	JAMES G.	MILLWRIGHT	0.00	600.00	OH.
MORGAN	HORACE	SAWMILLWORKER	0.00	0.00	IND.
PIERPOINT	JOHN	SAWMILLWORKER	5,750.00	3,500.00	KY.
SCHUCKMAKER	J.M.	SAWYER @ MILL	0.00	0.00	IND.
SIPES	ANDREW	SAWYER @ MILL	0.00	100.00	KY.
WEST	JAMES	SAWMILLWORKER	0.00	0.00	IND.
WILLIS	JAMES	SAWMILLWORKER	0.00	0.00	KY.

YEAR:1870 DISTRICT:GARNETTSTVILLE P.O.

AUSTIN	RICHARD H.	COTTON BAILER	0.00	300.00	VA.
AYLESWORTH	PHILIP Z.	COTTON SPINNER	30,000.00	2,000.00	RI.
BRANDENBURG	PETER K.	DAY LABORER	0.00	100.00	KY.
CHENAULT	FELIX	COTTON CORDER	0.00	300.00	KY.
CHENAULT	JOHN	COTTON FACTORY WORK.	0.00	0.00	KY.
CHENAULT	JOSEPH	FACTORY WORKER	0.00	0.00	KY.
CHENAULT	THOMAS	DAY LABORER	0.00	100.00	KY.
COLEMAN	ANDREW B.	MILLER	0.00	500.00	KY.
DAUGHERTY	GEORGE W.	DAY LABORER	0.00	0.00	KY.
DAVIS	AUGUSTINE	WOOL CARDER	0.00	0.00	KY.
HAWFIELD	MILTON	DAY LABORER	0.00	500.00	KY.
HICKS	THOMAS M.	DAY LABORER	0.00	0.00	KY.
LONG	WILLIAM	MACHINEST	0.00	250.00	KY.
SCIFERS	JOHN W.	DAY LABORER	0.00	0.00	KY.
SMITH	GEORGE W.	DAY LABORER	0.00	200.00	KY.
SPANGLERBRY	ANDREW	CARPET WEAVER	300.00	100.00	GERMANY
WHITE	JOHN	COTTON SPINNER	0.00	4,000.00	ENGLAND

YEAR:1880 DISTRICT:VILLAGE OF GRAHAMTON

??	??	COTTON MILLER	0.00	0.00	KY.
??	??	COTTON MILLER	0.00	0.00	KY.
??	??	COTTON MILLER	0.00	0.00	KY.
??	??	COTTON MILLER	0.00	0.00	KY.
??	??	COTTON MILLER	0.00	0.00	KY.
??	??	COTTON MILLER	0.00	0.00	KY.
??	??	COTTON MILLER	0.00	0.00	KY.
??	??	COTTON MILLER	0.00	0.00	UNKNOWN
??	??	MILLWRIGHT	0.00	0.00	UNKNOWN
ALLEN	ALLEN	COTTON MILLER	0.00	0.00	RI.
AYLSWORTH	P.Z.	MILL OWNER	0.00	0.00	KY.
BERNST	SARAH	COTTON MILLER	0.00	0.00	KY.
BRANDENBURG	HENRY	FLOURMILLER	0.00	0.00	KY.
BRYANT	WILLIAM	COTTON MILLER	0.00	0.00	KY.
CAVANAUGH	WILLIAM	SAWMILLWORKER	0.00	0.00	KY.
CHENAULT	FELIX	COTTON MILLER	0.00	0.00	UNKNOWN
CHENAULT	THOMAS J.	COTTON MILLER	0.00	0.00	KY.
COLEMAN	ANDREW B.	MILLER	0.00	0.00	UNKNOWN
COLEMAN	WILLIAM	MILLER	0.00	0.00	KY.
COLEMAN	WILLIAM D.	MILLER	0.00	0.00	KY.

ELLAM	JOHN P.	COTTON MILLER	0.00	0.00	ENGLAND
HERMANN	Z.D.	MILLER	0.00	0.00	KY.
HOLSTON	GEORGE	MILLER	0.00	0.00	KY.
JONES	DUDLEY	SAWMILLER	0.00	0.00	KY.
KEITH	THOMAS	COTTON MILLER			UNKNOWN
KESSIAN?	ANDREW	MILLER	0.00	0.00	KY.
MARRIOTT	E.S.	COTTON MILLER	0.00	0.00	KY.
MARRIOTT	EPHRAIM	COTTON MILLER	0.00	0.00	KY.
MARRIOTT	LEE	COTTON MILLER	0.00	0.00	KY.
NORTHCUT	DEBBA	COTTON MILLER			KY.
NORTHCUT	JOHN W.	COTTON MILLER			KY.
NORTHCUT	MARTHA	COTTON MILLER	0.00	0.00	KY.
ORWICK	JAKE	SAWMILLWORKER	0.00	0.00	KY.
PEAK	CHARLES	COTTON MILLER	0.00	0.00	UNKNOWN
POWEL	SARAH	COTTON MILLER	0.00	0.00	KY.
PRUITT	R.?	COTTON MILLER	0.00	0.00	KY.
PUSEY	JOHN R.	MILLER	0.00	0.00	KY.
SEELYE	MALISSA A.	COTTON MILLER			UNKNOWN
SEELYE	ROSEY J.	COTTON MILLER			UNKNOWN
STERRETT	SAMUEL	MILLER	0.00	0.00	PA.
STYLES	J.	MILLING	0.00	0.00	KY.
THOMAS	EMMETT A.	COTTON MILLER	0.00	0.00	KY.
THOMAS	JOHN G.	COTTON MILLER			UNKNOWN
WELCH?	??	COTTON MILLER	0.00	0.00	KY.
WELCH?	??	COTTON MILLER	0.00	0.00	KY.
WRIGHT	J.H.	SAWMILLWORKER?	0.00	0.00	PA.

APPENDIX C. KNOWN AND ESTIMATED LOCATIONS OF MILLS ON FORT KNOX

APPENDIX D. GLOSSARY OF MILLING TERMS

The following terms and definitions are abstracted from McGuire (1977) and Garber (1970).

- bedstone - the bottom grindstone, sometimes called the nether stone
- bolter - sifting machine for dressing flour with a cylinder of cloth.
- bolting - process of separating flour from bran or skin of the wheat by using fine mesh cloth serving as a sieve.
- bran - skin of wheat berry separated by bolting after grinding.
- breast wheel - mill wheel driven by a positive head of water amounting to less than the diameter of the wheel. As water strikes the breast wheel above or below its axis, the wheel turns against the current.
- buckets - enclosures formed by wood or iron, around the rim of a water wheel, into which water flows in order to turn the wheel.
- buhr spindle - a rod which extends upward through the eye of the bedstone and supports the runner.
- buhr stone - imported French millstone of high quality fresh water quartz, quarried in the Paris basin.
- carding mill - mill used to clean, separate and process wool.
- chop - product of a bread in a millstone grind.
- cogs - individual teeth of a gear wheel.
- composition stones - artificial millstones containing carborundum, cement or similar abrasive material.
- conveyor - a device used to move grain or meal from one place to another in a mill.
- custom mill - a mill that ground primarily for local customers.
- dam - a barrier built across stream to impound water for use in a mill.
- damsel - an iron or wooden rod terminating in a fork or crutch which straddles the rynd of the runner stone; employed with underdriven machinery to agitate the shoe feeding grain to the stones. It shakes the shoe which conveys the grain from the hopper to the millstones.
- descender - a device invented by Oliver Evans for the controlled downward movement of grain within the mill.
- dress - the pattern for cutting furrows on the face of a millstone.
- edge runner stones - stones designed to rotate in a vertical plane, the edge forming the crushing surface.
- elevator - a device for raising grains by means of cups on an endless belt, invented by Oliver Evans.
- extraction - percentage of product obtained, as measured against the gross weight of the raw material.
- eye - the hole in the center of the runner stone; inner third of the grinding surface.
- feed shoe - conveys grain from hopper to millstones.
- fellow - sections of the rim forming parts of a wooden wheel.
- flour - wheat meal dressed to remove bran and impurities.
- flume - head race in the form of a trough or channel carrying water to the wheel.
- flutter wheel - small water wheel of moderate diameter with radial floats; placed at the bottom of a chute, it worked by the impact of the water. Used primarily in up and down sawmills, it was capable of providing as many as 120 strokes of the saw per minute.
- forebay - reservoir or extension of flume or mill race. Water is passed to the water wheel.
- fulling mill - mill in which cloth is dressed after it has been woven. The fabric is scoured, cleaned and softened prior to be napped and smoothed under pressure.
- furrows - grooves cut in the grinding face of a millstone.
- grain - a small hard seed, especially the seed of one of the food plants (wheat, corn, rye, oats, rice and millet).
- grist - material ground in the mill.
- gudgeon - a metal fitting mounted to the end of a wooden shaft to insure longer wear.
- head gate - a water gate near a dam or at a mill pond to control the flow of water through a race or flume to a mill.
- head of water - the depth of water between the level in the mill dam and the point where it discharges onto the wheel.
- head race - that section of the mill stream above the wheel.
- hopper boy - an invention of Oliver Evans that spread out freshly ground flour for cooling and then gathered it together again for packing.

horse mill - rotary motion mill powered by horses walking around a turnpost in a circle.
 lantern pinion - vertical staves (rungs) mortised between wooden disks; a gear that looks like a cage or lantern.
 meal - the edible part of any grain; coarse, unbolted grain.
 merchant mill - mill grinding and shipping grain products commercially.
 middlings - coarse bits of the floury part of the wheat berry, with which small bits of bran may still be associated.
 mill pond - body of water, usually created by the construction of a dam. Source of water for the wheel.
 mill race - the channel thorough which water flows from the mill dam to the mill.
 miller - person who operates a mill.
 miller's toll - portion of ground meal retained by the miller as payment for his services.
 millstones - stones that break up the grain and grind it into flour.
 millwright - craftsman with an intimate knowledge of mill equipment, its construction and installation.
 mortar and pestle - simple grinding apparatus in which a receptacle (mortar) is used to hold grain while it is crushed by a club shaped implement (pestle).
 offal - that part of the grind which goes into feed.
 overshot - water wheel served by ahead race discharging over its outer circumference. Water strikes the wheel at the highest point and fills the buckets. The wheel turns forward by the weight of the water.
 penstock - a wooden trough or iron pipe carrying water to the wheel.
 pintle - the journal forming the upper termination of a post or spindle.
 purifier - device introduced early in the nineteenth century to extract fine dust from the meal by means of air currents.
 quern - primitive hand mill used for grinding; conical quern or hourglass mill has two conical shaped stones.
 roller mill - mill employing metal rollers in place of the traditional stones.
 rule of thumb - the old miller's method of testing flour and meal between his thumb and forefinger.
 run - term for a pair of stones used to describe the capacity of a mill.
 runner stone - the upper revolving millstone.
 rynd - an iron bearer set across the eye of the runner stone.
 sapling mill - form of pumping mill in which the resiliency of a sapling is used as an aid to driving a mortar and pestle.
 shaft - term for axle.
 sluice gate - gate at end of the flume nearest the mill pond used to control flow of water entering the flume.
 spur wheel - gear wheel with teeth (cogs) at edge which mesh with pinions.
 strike (strickle) - the straight edge used to level off grain or meal in a toll dish or measure.
 tail race - that section of the mill race downstream of the mill wheel.
 tail water - water leaving the water wheel.
 toll - portion of meal formerly taken by the miller in payment for grinding.
 toll dish - the receptacle or container used by the miller for taking toll.
 tub wheel - horizontal water wheel revolving in a circular wooden casing.
 turbine - water is fed to enclosed wheel which rotates in a horizontal plane via vanes on the wheel.
 undershot - water wheel powered by a head of water striking the wheel at a point near the bottom of the wheel, causing the wheel to revolve in a direction opposite to that of the flow of water in the sluiceway; momentum turns the wheel backward.
 upright shaft - the main vertical driving shaft of the mill.

APPENDIX E. VITAE OF PRINCIPAL INVESTIGATOR

CURRICULUM VITAE

Nancy O'Malley
Program for Cultural Resource Assessment
330A Virginia Ave.
University of Kentucky
Lexington, Kentucky 40506-9854
Phone: (606) 257-1944

Education

B.A. (1974) in Archaeological Studies from the University of Texas at Austin.

M.A. (1979) in Anthropology from the University of Kansas, Lawrence, Kansas.

Professional Employment

1. Research Associate, Kentucky Anthropological Research Facility, Department of Anthropology, University of Kentucky -- July 1984 to present.
Duties: Initiate and perform externally funded archaeological research. Occasional teaching as needed.

Current Projects:

Principal Investigator, Archaeological investigations of Squire Boone's Station, Shelby county, Kentucky. Federal Survey and Planning Grant, Shelbyville Development Corporation.

Principal Investigator. Archaeological excavations at Kinkeadtown, a post-Civil War African-American neighborhood in Lexington, Kentucky. Rose Street Extension Project for Lexington-Fayette Urban County Government.

Principal Investigator. Documentary and Archaeological Research on Hugh McGary's Station, Mercer County, Kentucky. Privately funded.

Principal Investigator. Evaluation of water powered mill and other industrial sites in Fort Knox, Kentucky. U.S. Department of Defense Legacy grant funding, Fort Knox Armor Center.

Principal Investigator. Documentary research on the history of Pitts Point, an extinct community in Fort Knox, Kentucky. U.S. Department of Defense Legacy grant funding, Fort Knox Armor Center.

Co-Principal Investigator. Phase II testing of three sites in Nelson county, Kentucky for Bardstown Industrial Development Corporation.

Collections Manager, Museum of Anthropology, University of Kentucky, Lexington

2. Staff Archaeologist, Program for Cultural Resource Assessment, Department of Anthropology, University of Kentucky, Lexington, Kentucky -- January, 1980 to July, 1984.
Duties: Develop competitive bids to perform cultural resources assessment for state or federal agencies or private firms.
Supervise the execution of each research project and participate in analysis and report preparation.
Develop opportunities for research unconnected to contract work; perform grant research.
Provide laboratory and other training for students in coordination with Departmental faculty.
Provide consultation with agencies and individuals for public education and involvement in local archaeology
Served as Principal or Co-Principal Investigator for 70 archaeological survey and excavation projects
3. Project Supervisor, Department of Anthropology, University of Kentucky, Lexington, Kentucky -- January, 1979 to January, 1980.
Duties: Fieldwork, data analysis and report preparation of Fort Knox, Kentucky Sample Survey, (co-authored).
4. Research Assistant, Museum of Anthropology, University of Kansas, Lawrence, Kansas -- June, 1978 to December, 1978.
Duties: Preparation of the Tuttle Creek Reservoir Survey report for the National Park Service, (co-authored).
Preparation of soils analysis and interpretation of the Traff Site, Jackson County, Missouri.
Survey of the Kansas City International Airport Environs area; preparation of ceramics section and analysis of historic sites for final report.
5. Research Assistant to Dr. John P. Augelli, Department of Geography, University of Kansas, Lawrence, Kansas -- June 1977 to May, 1978.
Duties: Research on various subjects and areas of Latin America.
Preparation of examinations for two courses, including the formulation of questions, grading, etc. ("Latin America" and "Today's World Divided").
Assistance in organization of classes and professional correspondence.
Manuscript review, evaluation and editing for publication.
6. Researcher, Museum of Natural History, University of Kansas, Lawrence, Kansas -- January, 1977 to May, 1977.
Duties: Research and design of eight anthropological exhibits on Plains Indians ("Toys", "Weaponry", "Clothing", "The Ghost Dance", "The Battle of the Little Bighorn", "Beadwork", "Quillwork", "Fur Trade").
7. Research Archaeologist, Texas Historical Commission, Austin, Texas -- November, 1972 to August, 1977.
Duties: Intensive training in processing, analysis and curation of artifact collections.
Fieldwork (surveying and excavation) in reservoir areas, prehistoric burial and habitation sites, and historic sites in southern, central and eastern Texas.
Intensive literature research including archaeological, ethnohistorical, historical and other archival references.

Analysis of lithic and historic artifact assemblages.
Assessment of areas for Environmental Impact Statements and cultural resource management studies.
Report writing and publication.
Soils analysis and interpretation.

Non-Contract Grants and Awards

University of Kentucky Office of Sponsored Projects Administration (OSPA) grant for statistical manipulation of environmental data from three regions in Kentucky (1981).

OSPA grant for research on Constantine Rafinesque's contribution to Kentucky archaeology (1983).

Two University of Kentucky Research Committee Grants with Karl Raitz for historic research in Bourbon County, Kentucky (1982 and 1983).

Kentucky Humanities Council Grant for the preparation of a traveling photographic exhibit on Kentucky archaeology (1983--co-sponsored by the National Endowment for the Humanities, the Kentucky Department of Libraries and Archives, Kentucky Historical Society and University of Kentucky Research Foundation).

Federal Survey and Planning Grant through the Kentucky Heritage Council for a survey and evaluation of early historic stations in the Inner Bluegrass Region of Kentucky (1983).

Federal Survey and Planning Grant through the Kentucky Heritage Council for a reanalysis of Adena ceramics from WPA-sponsored Kentucky mound excavations (1985).

Federal Survey and Planning Grant through the Kentucky Heritage Council for an archaeological sample survey of Old Washington, Mason County, Kentucky (1986).

Federal Survey and Planning Grant and State funding through the West Virginia Department of Culture and History for an archaeological survey of 5 mineral springs in southern West Virginia (1986 and 1987).

Joint funding from Kentucky Heritage Council, Kentucky Department of Parks, Madison County Historical Society and Ft. Boonesborough State Park Association for archaeological survey and testing in the Ft. Boonesborough environs, Madison County, Kentucky (1987).

Federal Survey and Planning Grant through the Kentucky Heritage Council and City of Prestonsburg for archaeological test excavation of the DeRossett-Johns Site, Prestonsburg, Kentucky (1990).

Federal Survey and Planning Grant through the Kentucky Heritage Council and the Land and Nature Trust of the Bluegrass for survey of the Boone Creek drainage, Fayette and Clark counties, Kentucky, with Chris Amos (1990).

Funding through Kentucky Department of Parks for documentary and archaeological research at Buffalo Furnace, Greenbo State Park, Greenup County, Kentucky, with Steven McBride (1990).

Funding through Kentucky Department of Parks for documentary and archaeological research at Boone Station State Park, Fayette County, Kentucky (1993).

Federal Survey and Planning Grant through the Kentucky Heritage Council for geophysical and archaeological investigation of late 18th century pioneer stations in the Bluegrass area of Kentucky (1993-1994).

Biographical Mention

Who's Who in the South and Southwest, 19th edition.

Community Service

Advisor, William S. Webb Archaeological Society (1982-1989)

Big Sister, Big Brothers/Big Sisters, Inc. (1982-1983)

Kentucky Humanities Council Speakers Bureau

Occasional teacher for Community Education Program, Lexington, Kentucky.

Occasional teacher for the Living Arts and Science Center, Lexington, Kentucky.

Teaching Experience

3-week training sessions for high school students in Experience Based Career Education Program, Fayette County Public Schools (since 1982 and on continuing intermittent basis)

3-week seminar in Historic Archaeology for Short Course Series, Program for Cultural Resource Assessment, Spring, 1982.

6-week Community Education class on Historic Archaeology, Fall, 1982.

6-week Seminar on Archaeological Field and Lab Techniques for Short Course Series, Program for Cultural Resource Assessment, Fall, 1982.

3-day field training session at St. Catharine of Siena, Motherhouse for Dominican Sisters, June 27-29, 1983.

6-week course on Introductory Archaeology for Living Arts and Science Center, Lexington, KY, Summer, 1984.

4-week course on Pioneer Settlement in Kentucky for Community Education, Spring, 1985.

8-week archaeological field school for Department of Anthropology, University of Kentucky, Summer, 1985 (co-taught).

4-week course on topics in archaeology for Community Education, Fall 1985; Spring 1986; Fall 1986; Spring 1987.

Chair for Ohio River Settlement session, Always A River Program, 1991; Louisville, Kentucky.

Special Training

1. Lithics analysis
2. Ceramics analysis (including petrographic analysis)
3. Soils analysis (field examination and labwork)
4. Interpretation of paleoecological data
5. Photography
6. Surveying and excavation techniques
7. Artifact processing and curation
8. Use of statistics and computer techniques
9. Preparation of proposals (including research design, methodology, and budgets)
10. Historic archaeology
11. Documentary research

Professional Memberships and Academic Service

Member, Committee for Historic Preservation Program in Architecture,
University of Kentucky

Member, Kentucky Organization for Professional Archaeologists

Member, Kentucky Archaeological Task Force

Member, Southeastern Archaeological Conference

Member, Society for American Archaeology

Member, Society for Historical Archaeology

Member, West Virginia Archaeological Society

Member, W. S. Webb Archaeological Society

Conference Papers and Symposia

Co-organized (with W. S. McBride) Symposium: Too Close for Comfort: 18th Century Defensive Sites in the Upper South. Southeastern Archaeological Conference/Midwest Archaeological Conference, Lexington, Kentucky, November 9-12, 1994.

"Investigating Late 18th-Century Frontier Stations in Kentucky Using Geophysical Methods". Southeastern Archaeological Conference/Midwest Archaeological Conference, Lexington, Kentucky, November 9-12, 1994.

"Kinkeadtown: A Post Civil War African American Neighborhood in Lexington, Kentucky". National Society of Daughters of the Union, Lexington, Kentucky, May 25, 1994.

"The Pursuit of Freedom: African American Life in Kinkeadtown after the Civil War". 12th Annual

Symposium on Ohio Valley Urban and Historic Archaeology, March 11-13, 1994.

"Pioneer Stations and Frontier Settlement in Lexington, Kentucky". McConnell Springs Roundtable, Lexington, Kentucky, February 1, 1994.

"Pioneer Stations in Mercer County, Kentucky". Harrodsburg Historical Society, November 9, 1993.

"Pioneer Stations in Central Kentucky". Fayette County Genealogical Society, Lexington, October 5, 1993.

"Bowman's Station". Bowman's Station Reunion, Mercer county, Kentucky, August 28, 1993.

"Kinkeadtown: A Post Civil War African American Neighborhood in Lexington, Kentucky". Summer seminar for secondary school teachers in history, Transylvania University, Lexington, July 28, 1993.

"Kinkeadtown: A Post Civil War African American Neighborhood in Lexington, Kentucky". History honorary, Transylvania University, October 13, 1992.

"Stockading Up on the Kentucky Frontier: Myths and Realities". Contest for the Old Northwest, 1991; Defiance, Ohio.

"Living the Good Life: Urban Archaeology in Early Prestonsburg, Floyd County, Kentucky. Preservation in Profile: Kentucky's Historic Preservation Conference, 1991; Covington, Kentucky.

"Ground Truthing Kentucky's Pioneer History", Archaeology Weekend sponsored by the University of Kentucky Museum of Anthropology, 1991; Lexington, Kentucky.

"Raids, Stockades, and Canebrake Glades: Pioneer Archaeology in Kentucky". Frontier Kentucky: Myth and Reality, Teacher Symposium, 1990; Frankfort, Kentucky.

"Free at Last: Post Civil War Black History in Lexington, Kentucky". Symposium on Ohio Valley Urban and Historic Archaeology, 1990; East Liverpool Museum of Ceramics, East Liverpool, Ohio.

"Ceramic Patterning at the Late Woodland Childers Site". Southeastern Archaeological Conference, Annual Meeting, 1988, New Orleans, Louisiana.

"Adena Mound Ceramics in Retrospect". Society for American Archaeology, Annual Meeting, 1986; New Orleans, Louisiana.

"Health or Habit?: The Incidence of Lead Glazed Ceramics in Two Historic Assemblages in Kentucky". Symposium on Ohio Valley Urban and Historic Archaeology, 1986; Historical Society of Western Pennsylvania, Pittsburgh, Pennsylvania.

"'Stockading Up': An Archaeological Evaluation of Pioneer Station Sites in Central Kentucky." Symposium on Ohio Valley Urban and Historic Archaeology, 1985; Ohio Historical Center, Columbus, Ohio.

"Documenting Historic Sites in Kentucky: Some Practical Considerations". Symposium on Ohio Valley Urban and Historic Archaeology, 1984; Indiana State Museum, Indianapolis, Indiana.

"A Methodology for Reconstructing Historic Agro-ecosystems" (Co-authored with Karl B. Raitz). Symposium on Ohio Valley Urban and Historic Archaeology, 1983; University of Louisville, Louisville, Kentucky.

"Ceramics from Peter Village, an Early Woodland/Adena Occupation Site in Fayette County, Kentucky." (Co-authored with Terry Tune and Malinda Stafford). Southeastern Archaeological Conference, 1982; Memphis, Tennessee.

"Settlement Pattern Shifts for an Upland Setting in Western Kentucky and Middle Tennessee". Central States Anthropological Society, 1982; Lexington, Kentucky.

"Site Location and Environment: Toward a Predictive Model" (co-authored with Richard S. Levy). Southeastern Archaeological Conference, 1979; Atlanta, Georgia.

"A Petrographic Analysis of Late Woodland Ceramics from the Sperry Site, Jackson County, Missouri. Plains Conference, 1978; Denver, Colorado.

"Relationships Between Hunting Tools and Subsistence Systems." Plains Conference, 1977; Lincoln, Nebraska.

Publications

Fox, Daniel, Robert J. Mallouf, Nancy O'Malley and William M. Sorrow

1974 Proposed Cuero Reservoir. Texas Water Development Board and Texas Historical Commission. Austin, Texas.

O'Malley, Nancy

1976 Soils Analysis and Interpretation of Four Sites in the Big Pine Lake, Lamar and Red River Counties, Texas. In Archaeological Excavations, 1974-1975, at the Proposed Big Pine Lake, Lamar and Red River Counties by Robert Mallouf and William Sorrow. U.S. Army Corps of Engineers and the Texas Historical Commission. Austin, Texas.

O'Malley, Nancy, Lynn Osborne Bobbitt, and Dan Scurlock

1976 A Historical and Archaeological Investigation of Roma, Texas. Office of the State Archaeologist Special Report 20. Austin, Texas.

Fox, Daniel E., Warren M. Lynn, and Nancy O'Malley

1977 Cultural Resource Survey of Choke Canyon Reservoir, Live Oak and McMullen Counties, Texas. Texas Water Development Board and Texas Historical Commission. Austin, Texas.

O'Malley, Nancy

1979 A Soils Analysis of the Traff Site, Jackson County, Missouri. Museum of Anthropology. University of Kansas, Lawrence, Kansas.

O'Malley, Nancy

1979 An Archaeological Reconnaissance of a Portion of Starr County, Texas. University of Texas Natural Land Areas Survey. Austin, Texas.

O'Malley, Nancy

1979 Ceramic Artifacts. In Cultural Resources of Kansas City International Airport and its Environs: An Archaeological Reconnaissance compiled by Brad Logan. University of Kentucky Museum of Anthropology. Research Series No. 3. Lawrence, Kansas.

O'Malley, Nancy, and Boyce Driskell

1979 An Archaeological Survey and Assessment of Areas to be Modified at the Wilcox Gunnery Range, Fort Knox, Kentucky. University of Kentucky, Department of Anthropology, Archaeological Report 15, Lexington.

Schmits, Larry J., Kenneth C. Reid and Nancy O'Malley

1980 Dead Hickory Tree: A Plains Village in East Central Kansas. Missouri Archaeologist 41:1-56.

Johnson, A. E., C. A. Johnson II, Nancy O'Malley, and R. J. Ziegler

1980 Prehistoric Cultural Resources of Tuttle Creek Lake. U.S. Department of the Interior, Heritage Conservation and Recreation Service, Interagency Archaeological Services, Denver, Colorado.

O'Malley, Nancy, Boyce Driskell, Julie Riesenweber and Richard Levy

1980 Stage I Archaeological Investigations at Fort Knox, Kentucky. University of Kentucky, Department of Anthropology. Archaeological Report No. 16, Lexington.

Sorensen, Jerrel H., Michael B. Collins, Thomas W. Gatus, Susan Grant,
Richard Levy, Charles R. Norville, Nancy O'Malley, Julie Riesenweber, and
Malinda Stafford

1980 Final Report. Taylorsville Lake, Kentucky, Archaeological Resources Survey and Evaluation, Season II. University of Kentucky, Department of Anthropology, Archaeological Report 24, Lexington.

O'Malley, Nancy, Annette Nekola, Kenneth W. Robinson and David Pollack

1981 A Cultural Resources Assessment of Areas of Proposed Sewer System Construction, Simpsonville, Shelby County, Kentucky. University of Kentucky, Department of Anthropology, Archaeological Report No. 38, Lexington.

O'Malley, Nancy, Cynthia Jobe, Thomas Gatus

1980 Phase II Testing of 43 Prehistoric Sites within the J. K. Smith Power Station Site, Clark County, Kentucky. University of Kentucky, Department of Anthropology, Archaeological Report No. 40, Lexington.

Stafford, Malinda, with contributions by Christopher Turnbow and Nancy O'Malley

1980 An Archaeological Resource Assessment of Selected Portions of the Proposed J. K. Smith

Power Station, Clark County, Kentucky. University of Kentucky, Department of Anthropology, Archaeological Report No. 47, Lexington.

O'Malley, Nancy

1981 A Petrographic Analysis of Late Woodland Ceramics from the Sperry Site, Jackson County, Missouri. Plains Anthropologist, 26-93:241-249.

Coyle, John and Nancy O'Malley

1981 A Cultural Resource Assessment of Proposed Extensions and Modifications in the Big Sandy Water District, Boyd and Carter Counties, Kentucky. University of Kentucky, Department of Anthropology, Archaeological Report No. 73, Lexington.

O'Malley, Nancy

1982 An Archaeological Survey of Areas Scheduled for Impact by Proposed Eastern Gas Shale, Mineback in Rowan County, Kentucky. University of Kentucky, Department of Anthropology, Archaeological Report no. 77, Lexington.

Railey, Jimmy A. and Nancy O'Malley

1982 A Cultural Resource Reconnaissance of Two Areas Along the Cumberland River in Knox County, Kentucky. University of Kentucky, Department of Anthropology, Archaeological Report 79, Lexington.

Dillehay, T. D., T. Gatus, N. O'Malley (eds.)

1982 An Archaeological Mitigation of Site 40Jk27, Jackson County, Tennessee. University of Kentucky, Department of Anthropology, Archaeological Report 68, Lexington.

Raitz, Karl B. and Nancy O'Malley

1983 A Methodology for Reconstructing Historic Agroecosystems. Proceedings of the Symposium on Ohio Valley Urban and Historic Archaeology, vol. 1, pp. 155-163.

O'Malley, N., T. W. Tune and M. S. Blustain

1983 Technological Examination of Fayette Thick Ceramics: A Petrographic Analysis and Review. Southeastern Archaeology 2(2):145-154.

Turnbow, C. A., C. E. Jobe, N. O'Malley, C. W. Cowan, D. A. Wymer, and M. Seme

1983 Archaeological Investigations of the Goolman, DeVary, and Stone Sites in Clark County, Kentucky. University of Kentucky, Department of Anthropology, Archaeological Report 78, Lexington.

O'Malley, N., J. Riesenweber and A. G. Henderson

1983 Archaeological Investigations along the Lower Cumberland River, Livingston and Lyon Counties, Kentucky. University of Kentucky, Department of Anthropology, Archaeological Report 75, Lexington.

O'Malley, Nancy

1983 A Cultural Resource Assessment of 25 Miles of Water Lines in Warren County, Kentucky. University of Kentucky, Department of Anthropology, Archaeological Report 100, Lexington.

O'Malley, Nancy, Jared Funk, Cynthia Jobe, Thomas Gatus and Julie Riesenweber

1984 Archaeological Investigations in Fort Campbell, Kentucky-Tennessee. University of Kentucky, Department of Anthropology, Archaeological Report 67, Lexington.

O'Malley, Nancy

1984 A Cultural Resource Assessment of a Small Tract in Harrodsburg, Mercer County, Kentucky. University of Kentucky, Department of Anthropology, Archaeological Report 106, Lexington.

O'Malley, Nancy

1984 A Cultural Resource Assessment of a 4-Acre Tract in the Westwood Subdivision, Jessamine County, Kentucky. University of Kentucky, Department of Anthropology, Archaeological Report 121, Lexington.

O'Malley, Nancy

1984 Cultural Resource Assessment of the Moorman Dock Project Area, Muhlenberg County, Kentucky. University of Kentucky, Department of Anthropology, Archaeological Report 119, Lexington.

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1985 "Stockading Up": An Archaeological Evaluation of Pioneer Stations in the Inner Bluegrass Region of Kentucky. University of Kentucky, Department of Anthropology, Archaeological Report 127, Lexington.

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1985 Prehistory Along the Greenbrier: Archaeological Investigations at Pence Springs, Summers County, West Virginia. University of Kentucky, Department of Anthropology, Archaeological Report 132, Lexington.

O'Malley, Nancy

1985 Documenting Historic Sites in Kentucky: Some Practical Considerations. Proceedings of the Symposium on Ohio Valley Urban and Historic Archaeology. Volume II.

Dillehay, Tom D., Nancy O'Malley and Thomas Gatus (editors)

1985 Prehistory of the Middle Cumberland River Valley: The Hurricane Branch Site, Jackson County, Tennessee. Occasional Papers in Anthropology No. 4. Department of Anthropology, University of Kentucky, Lexington.

Raitz, Karl and Nancy O'Malley

1985 Assessing the Influence of Soils in Historic Agricultural Adaptation. Historical Methods 18(4):137-146.

O'Malley, Nancy

1986 Cultural Materials from Short Cave. National Speological Society, News (February):35-36).

O'Malley, Nancy

1987 A Lexington Suburb in Historical and Archaeological Perspective: Documentary Research of the Proposed Lextran Transit Site. University of Kentucky, Department of Anthropology, Archaeological Report 161, Lexington.

O'Malley, Nancy

1987 Middle Class Farmers on the Urban Periphery: Historic Archaeological Investigations of the Johnson/Bates Farmstead Site, Jefferson County, Kentucky. University of Kentucky, Department of Anthropology, Archaeological Report 162, Lexington.

O'Malley, Nancy

1987 A Cultural Resource Assessment of a Sewage Plant Expansion in Nicholas County, Kentucky. University of Kentucky, Department of Anthropology, Archaeological Report 169, Lexington.

O'Malley, Nancy

1987 A Cultural Evaluation of Archaeological Resources Along Paris Pike, Bourbon and Fayette Counties, Kentucky. University of Kentucky, Department of Anthropology, Archaeological Report 172, Lexington.

O'Malley, Nancy

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O'Malley, Nancy

1988 "Taking the Waters": Archaeological Investigations at Five Mineral Springs in Southern West Virginia. University of Kentucky, Department of Anthropology, Archaeological Report 178, Lexington.

O'Malley, Nancy

1988 Adena Mound Ceramics in Retrospect. pp. 46-63. In New Deal Era Archaeology and Current Research In Kentucky, edited by D. Pollack and M. L. Powell. Kentucky Heritage Council, Frankfort.

O'Malley, Nancy

1989 Searching for Boonesborough. University of Kentucky, Department of Anthropology, Archaeological Report 193, Lexington.

O'Malley, Nancy

1989 Cultural Resources Assessment of Lots 14, 15 and 19 in Bradford Place, Bourbon County, Kentucky. University of Kentucky, Department of Anthropology, Archaeological Report 202, Lexington.

O'Malley, Nancy

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O'Malley, Nancy

1989 The DeRossett-Johns Site: An Historic Archaeological Study in Prestonsburg, Floyd County, Kentucky. University of Kentucky, Department of Anthropology, Archaeological Report 210, Lexington.

O'Malley, Nancy

1989 A Cultural Resource Assessment of the Proposed May's Lick Park, May's Lick, Mason County, Kentucky. University of Kentucky, Department of Anthropology, Archaeological Report 216, Lexington.

O'Malley, Nancy

1990 Documentary Review of Site 15Ma116, Richmond Industrial Park, Madison County, Kentucky. University of Kentucky, Department of Anthropology, Archaeological Report 220, Lexington.

O'Malley, Nancy

1990 Ceramics from the Childers and Woods Site. In Childers and Woods: Two Late Woodland Sites in the Upper Ohio Valley, Mason County, West Virginia, by Michael J. Shott. University of Kentucky, Department of Anthropology, Archaeological Report 200, Lexington.

O'Malley, Nancy

1990 A Documentary Review of the Rose Street Extension Project Area, Lexington, Kentucky. University of Kentucky, Department of Anthropology, Archaeological Report 228, Lexington.

O'Malley, Nancy

1990 Analysis of the Ceramics from the Atterbury Site. In Riverton Lithics and Woodland Ceramics: Archaeological Data Recovery at 12-13-815, a Multicomponent Prehistoric Site in Bartholomew County, Indiana. [DRAFT] Prepared by C. A. Bergman, D. J. Rue and J. F. Dorsschuk, Project No. C7005. 3D/Environmental Services, Inc. and WAPORA, Inc., Cincinnati, Ohio.

O'Malley, Nancy

1990 The DeRossett-Johns Site: Archaeological Exploration of Prestonsburg's Early History. University of Kentucky, Department of Anthropology, Archaeological Report 243, Lexington.

O'Malley, Nancy

1991 Archival Research on the Stoner Creek Village Apartments in North Middletown, Bourbon County, Kentucky. University of Kentucky, Department of Anthropology, Archaeological Report No. 256, Lexington.

Amos, Chris and Nancy O'Malley

1991 Milling and Related Industry in the Boone Creek Drainage. University of Kentucky, Department of Anthropology, Archaeological Report No. 262, Lexington.

O'Malley, Nancy

1992 Entries on Bowman's, Craig's, Cox's, Hinkston's (Ruddell's), Martin's, McConnell's, Maulding's, Logan's, Innes' and Pottenger's Stations, on stations, and on Boonesborough. In The Kentucky Encyclopedia, edited by John E. Kleber, The University Press of Kentucky, Lexington.

O'Malley, Nancy

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O'Malley, Nancy

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O'Malley, Nancy

1992 Archaeological Test Excavations at Two Sites along Paris Pike, Bourbon County, Kentucky. University of Kentucky, Department of Anthropology, Archaeological Report No. 291, Lexington.

O'Malley, Nancy, W. Stephen McBride and David E. Rotenizer

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O'Malley, Nancy and Karen Hudson

1993 Cultural Resource Assessment of Boone Station State Park, Fayette County, Kentucky. University of Kentucky Department of Anthropology, Archaeological Report 316, Lexington.

O'Malley, Nancy

1994 Cultural Resource Assessment of 40 Acres for a Proposed Housing Development near Wilmore, Jessamine County, Kentucky. University of Kentucky Department of Anthropology, Archaeological Report 339, Lexington.

O'Malley, Nancy (editor)

in press Rock Art of Kentucky. Authors: Fred Coy, Tom Fuller, Larry Meadows and James Swauger. Kentucky Heritage Council, Frankfort.

O'Malley, Nancy

1995 A Cultural Resource Assessment of a Walking Trail Route in Mercer County Park near Harrodsburg, Kentucky. University of Kentucky Department of Anthropology, Archaeological Report 343, Lexington.

O'Malley, Nancy

1995 McConnell Springs. University of Kentucky Department of Anthropology, Archaeological Report 365, Lexington.

Audiovisual Presentations

Traveling Photographic Exhibit entitled, "Kentucky's Ancient Past" for exhibition through the Kentucky public library system.

Photographic Exhibit entitled, "Kinkeadtown: Meeting Black Housing Needs After the Civil War", for Lexington Public Library.